Author Index

Abagyan, R. A. See Tumanyan, V. G., 1499
Aggarwal, A.
—; Islam, S. A.; Kuroda, R.; Neidle, S.: X-Ray Cyrstallographic Analysis of a Ternary Intercalation Complex between Proflavine and the Dinucleoside Monophosphates CpA and UpG, 1025
Albanese, G.
—; Bridelli, M. G.; Deriu, A.: Structural Dynamics of Melanin Investigated by Rayleigh Scattering of Mössbauer Radiation, 1481
Allen, F. S.
—; Gray, D. M.: The Resolution of Nucleic Acid–Ligand Binding Sites by CD First-Neighbor Analysis, 2661
—; Gray, D. M.; Ratliff, R. L.: On the First-Neighbor Analysis of Nucleic Acid CD Spectra: The Definitive *T* Matrix and Considerations of Various Methods, 2639
Allen, L. C. See Sheridan, R. P., 195
Allison, S. A.
Total Intensity Light Scattering from Short, Optically Anisotropic Wormlike Chains (Erratum), 607
—; McCammon, J. A.: Multistep Brownian Dynamics: Application to Short Wormlike Chains, 363
—; McCammon, J. A.: Transport Properties of Rigid and Flexible Macromolecules by Brownian Dynamics Simulation, 167
—; Staskus, P. W.; Baase, W. A.: Precollapse of T7 DNA by Spermidine at Low Ionic Strength: A Linear Dichroism and Intrinsic Viscosity Study, 2835
Alva, C. See Diem, M., 1917
Amisaki, T. See Kitamura, K., 1169
Ananthanarayanan, V. S. See Lee, E., 1193
Anderson, J. See Maurer, P. H., 1141
Ando, I. See Saitô, H., 2279
Anshelevich, V. V.
—; Vologodskii, A. V.; Lukashin, A. V.; Frank-Kamenetskii, M. D.: Slow Relaxational Processes in the Melting of Linear Biopolymers: A Theory and Its Application to Nucleic Acids, 39
Anusiem, A. C. I.
—; Kelleher, M.: Analysis of the High- and Low-Spin Soret Bands of Horse-Heart Metmyoglobin Complexes, 1147
Applequist, J. See Caldwell, J. W., 1891
Aubert, J. P. See Kozlowski, H., 1241
Audry, E. See Huong, P. V., 71
Ausio, J.
—; Greulich, K. O.; Haas, E.; Wachtel, E.; Wachtel, W.: Characterization of the Fluorescence of the Protamine Thynnine and Studies of Binding to Double-Stranded DNA, 2559

Baase, W. A. See Allison, S. A., 2835
Baba, Y. See Kitamura, K., 1169
Babu, U. M. See Maurer, P. H., 1141
Balaram, P. See Vijayakumar, E. K. S., 877
Balazs, A. C.
—; Epstein, I. R.: Kinetics of Irreversible Dissociation for Proteins Bound Cooperatively to DNA, 1249
Bale, M. D.
—; Janmey, P. A.; Ferry, J. D.; Lorand, L.: Kinetics of Formation of Fibrin Oligomers. III. Ligation Kinetics Concurrent with and Subsequent to Oligomer Assembly, 127
Band, P.
—; Lukton, A.: Catalytic Influence of Heparin on Auramine O Hydrolysis: A Basis For Differentiating Heparin from Other Glycosaminoglycans Based on Its Properties as a Polyelectrolyte, 2223
Bandekar, J.
—; Zundel, G.: Low-Temperature Conformation of Mg^{2+}-Poly(U) in D_2O as Revealed by IR and Raman Spectroscopy and by Normal-Mode Analysis Treatment, 2623
Banerjee, A. See Thiyagarajan, P., 159
Barabas, K. See Tomasz, J., 667
Barbier, B.
—; Caille, A.; Brack, A.: Synthesis and β-Conformation of Sequential Polypeptides Containing Arginine, Histidine, and Leucine, 2299
Becktel, W. J. See Lerner, D. B., 2157
Begard, E. See Bonnet, D., 2587

Behlke, J. See Rueger, M., 747
Benevides, J. M.
—; Lemeur, D.; Thomas, G. J., Jr.: Molecular Conformations and 8-CH Exchange Rates of Purine Ribo- and Deoxyribonucleotides: Investigation by Raman Spectroscopy, 1011
Benham, C. J. See Brady, G. W., 2963
Benight, A. S. See Wartell, R. M., 1137
Berendsen, J. C. See Herman, J., 1513
Berg, O. G.
Diffusion-Controlled Protein–DNA Association: Influence of Segmental Diffusion of the DNA, 1869
Berns, D. S. See Chen, C.-H., 887
Bhatnagar, R. S. See Diem, M., 2955; Renugopalakrishnan, V., 623
Bi, R. C.
—; Dauter, Z.; Dodson, E.; Dodson, G.; Giordano, F.; Reynolds, C.: Insulin's Structure as a Modified and Monomeric Molecule (Communication), 391
Bienert, M. See Rueger, M., 747
Binst, G. V. See Wynants, C., 1799
Blackwell, J. See Lee, D. M., 111
Blaney, J. M. See Oatley, S. J., 2931
Bloomfield, V. A. See Fried, M. G., 2141; Thomas, T. J., 1295
Bohidar, H. B.
—; Geissler, E.: Static and Dynamic Light Scattering from Dilute Insulin Solutions, 2407
Bonnet, D.
—; Marden, M. C.; Begard, E.; Hoa, G. H. B.; Douzou, P.: Tritium Exchange of Spectrin Versus Temperature, 2587
Borochov, N.
—; Eisenberg, H.: Conformation of LiDNA in Solutions of LiCl, 1757
Borso, C. S. See Thiyagarajan, P., 159
Bottka, S. See Tomasz, J., 667
Brack, A. See Barbier, B., 2299
Brady, G. W.
—; Foos, D.; Benham, C. J.: Evidence for an Interwound Form for the Superhelix in Circular DNA (Communication), 2963
Breiner, T. See Holtzer, M. E., 1811
Bridelli, M. G. See Albanese, G., 1481
Burcham, T. S.
—; Knauf, M. J.; Osuga, D. T.; Feeney, R. E.; Yeh, Y.: Antifreeze Glycoproteins: Influence of Polymer Length and Ice Crystal Habit on Activity, 1379
Burghardt, T. P.
Model-Independent Fluorescence Polarization for Measuring Order in a Biological System, 2383
Burnfield, K. E. See Lee, D. M., 111
Bustamante, C.
—; Stigter, D.: Intercalation of Cationic Dyes in the DNA Double Helix: Introductory Theory, 629

Caille, A. See Barbier, B., 2299
Caldwell, J. W.
—; Applequist, J.: Theoretical π–π^* Absorption, Circular Dichroic, and Linear Dichroic Spectra of Collagen Triple Helices, 1891
Capaldi, M. J.
—; Chapman, J. A.: The C-Terminal Extrahelical Peptide of Type I Collagen and Its Role in Fibrillogenesis *in vitro*: Effects of Ethylurea, 313
Capasso, S.
—; Mazzarella, L.; Tancredi, T.; Zagari, A.: Synthesis and Properties of L-Cysteinyl-L-Cysteine Disulfides, 1085
Chakrabarti, S.
—; Miller, W. G.: Aggregation of Poly(γ-benzyl-α, L-glutamate), 719
Chandrasekaran, R. See Mitra, A. K., 2513
Chang, T. See Hvidt, S., 1283
Chapman, J. A. See Capaldi, M. J., 313
Chen, C.-H.
—; Tow, F.; Berns, D. S.: Solvent Isotope Effect on the Differences in Structure and Stability between Normal and Deuterated Proteins, 887
Cheng, D. M. See Giessner-Prettre, C., 377
—; Kan, L.-S.; Frechet, D.; Ts'o, P. O. P.; Uesugi, S.; Shida, T.; Ikehara, M.: ^{1}H- and ^{31}P-Nuclear Magnetic Resonance Studies on the Conformation of d-(CpGpCpG)$_2$ and d-(CpGpCpGpCpG)$_2$ Short Helices in B-Conformation, 775
—; Kan, L.-S.; Iuorno, V. L.; Ts'o, P. O. P.: ^{31}P-NMR Studies of Deoxyoligonucleotides, 575
Chevaillier, P. See Kozlowski, H., 1241
Chiavarini, S.
—; De Santis, P.; Morosetti, S.; Palleschi, A.: Topological Aspects of Conformational Transformations in Proteins, 1547
Chinsky, L.
—; Jolles, B.; Laigle, A.; Turpin, P. Y.; Taboury, J.; Taillandier, E.: Identification of a New Electronic Transition in the Z Form of Poly(dG-dC)-Poly(dG-dC) by Infrared Absorption and Resonance Raman Spectroscopy, 1931
Chottard, G. See Segal, E., 1623
Chottard, J.-C. See Segal, E., 1623
Chuman, H. See Schafer, L., 2335
Ciardelli, F.
—; Pieroni, O.; Fissi, A.; Houben, J. L.: Azobenzene-Containing Polypeptides: Photoregulation of Conformation in Solution, 1423

Ciarkowski, J.
CNDO/2 Quantum-Mechanical Calculations of the Conformational Flexibility of the Diketopiperazine Skeleton, 397
Cleland, R. L.
Viscometry and Sedimentation Equilibrium of Partially Hydrolyzed Hyaluronate: Comparison with Theoretical Models of Wormlike Chains, 647
Coffman, G. L.
—; Yielding, L. W.; Yielding, K. L.: Monoazido Analog of Ethidium as a Chromatin Probe: Binding to DNA, 1067
Cohen, M. See Starzak, M., 847
Comarmond, M. B. See Huong, P. V., 71
Cooperman, B. S. See Thiyagarajan, P., 159
Crothers, D. M. See Ryan, D. P., 537
Cusack, S.
—; Lees, S.: Variation of Longitudinal Acoustic Velocity at Gigahertz Frequencies with Water Content in Rat-Tail Tendon Fibers, 337

Darsey, J. A. See Overgaard, T., 1595
Dauter, Z. See Bi, R. C., 391
de la Torre, J. G.
—; Martinez, M. C. L.; Tirado, M. M.: Dimensions of Short, Rodlike Macromolecules from Translational and Rotational Diffusion Coefficients. Study of the Gramicidin Dimer (Communication), 611
De Maeyer, M. C. H. See Hol, W. G. J., 809
Deriu, A. See Albanese, G., 1481
De Santis, P. See Chiavarini, S., 1547
DeVoe, H. See Nelson, H. P., Jr., 897
de Xammar Oro, J. R.
—; Grigera, J. R.: Dielectric Properties of Aqueous Solutions of Sonicated DNA above 40 MHz, 1457
Diem, M.
—; Bhatnagar, R. S.; Druyan, M. E.; Renugopalakrishnan, V.: Solution-Phase Raman-Spectroscopic Studies on Synthetic Collagen Analogs: Prolyl-Prolyl-Glycine and (Prolyl-Prolyl-Glycine)$_{10}$ (Communication), 2955
—; Oboodi, M. R.; Alva, C.: Determination of Peptide Conformation via Vibrational Coupling: Application to Diastereoisomeric Alanyl Dipeptides, 1917
D. Moras See Huong, P. V., 71
Dodson, E. See Bi, R. C., 391
Dodson, G. See Bi, R. C., 391
Donoghue, J. E. See Yielding, L. W., 83
Dorfman, B. H.
—; Van Zandt, L. L.: Effects of Viscous Solvent on DNA Polymer in a Fiber, 913
Douzou, P. See Bonnet, D., 2587
Druyan, M. E. See Diem, M., 2955
Dwivedi, A. M.
—; Krimm, S.: Vibrational Analysis of Peptides, Polypeptides, and Proteins. XVIII. Conformational Sensitivity of the α-Helix Spectrum: α_{I}- and α_{II}-Poly(L-alanine), 923
—; Krimm, S.; Malcolm, B. R.: Vibrational Analysis of Peptides, Polypeptides, and Proteins. XXIV. Conformation of Poly(α-aminoisobutyric acid), 2025

Eagland, D. See Thorn, I., 353
Ebert, B.
—; Elmgren, H.: Helican Conformation of Amylose in Aqueous Solution. II. Electron Spin Resonance, Fluorescence Depolarization, and Sedimentation Measurements, 2543
Edmondson, S. P.
—; Gray, D. M.: Analysis of the Electrophoretic Properties of Double-Stranded DNA and RNA in Agarose Gels at Finite Voltage Gradient, 2725
Eichhorn, G. L. See Shin, Y. A., 325
Einarsson, R. See Piculell, L., 1683
Eisenberg, H. See Borochov, N., 1757
Elmgren, H. See Ebert, B., 2543
Helical Conformation of Amylose in Aqueous Solution. I. Viscosity Measurements, 2525
Englander, S. W. See Preisler, R. S., 2099
Epstein, I. R. See Balazs, A. C., 1249
Erie, D. See Overgaard, T., 1595
Esipova, N. G. See Makarov, A. A., 5; Tumanyan, V. G., 1499
Everett, R. See Lerner, D. B., 2157

Farinella, M. See Pispisa, B., 1465
Fasman, G. D. See Huvos, P., 2195
Fazakerley, G. V. See Hermann, D., 945, 973, 1143
—; Hermann, D.; Guschlbauer, W.; Hawkes, G. E.: Proton-NMR Study of the Interaction of *trans*-Dichloro-Diamine-Platinum(II) with Poly(I) and Poly(I)·Poly(C), 961
Feeney, R. E. See Burcham, T. S., 1379
Ferry, J. D. See Bale, M. D., 127; Muller, M. F., 2311
Finney, J. L. See Poole, P. L., 1647
Fissi, A. See Ciardelli, F., 1423
Foos, D. See Brady, G. W., 2963
Foster, K. R.
—; Stuchly, M. A.; Kraszewski, A.; Stuchly, S. S.: Microwave Dielectric Absorption of DNA in Aqueous Solution, 593
Frank-Kamenetskii, M. D. See Anshelevich, V. V., 39
Frazier, J. See Preisler, R. S., 2099
Frechet, D. See Cheng, D. M., 775

Fried, M. G.
—; Bloomfield, V. A.: DNA Gelation in Concentrated Solutions, 2141
Friedman, R. A. G.
—; Manning, G. S.: Polyelectrolyte Effects on Site-Binding Equilibria with Application to the Intercalation of Drugs into DNA, 2671
Fritzsche, H. See Pohle, W., 2603

Gao, Y. See Lee, W. K., 257
Gast, K. See Rueger, M., 747
Geissler, E. See Bohidar, H. B., 2407
Gerber, C. See Lorenzi, G. P., 1905
Giege, R. See Huong, P. V., 71
Giessner-Prettre, C.
—; Pullman, B.; Prado, F. R.; Cheng, D. M.; Iuorno, V. L.; Ts'o, P. O. P.: Contributions of the PO Ester and CO Torsion Angles of the Phosphate Group to ^{31}P-Nuclear Magnetic Shielding Constant in Nucleic Acids: Theoretical and Experimental Study of Model Compounds, 377
Giordano, F. See Bi, R. C., 391
Girault, J.-P. See Segal, E., 1623
Go, M.
—; Scheraga, H. A.: Molecular Theory of the Helix–Coil Transition in Polyamino Acids. V. Explanation of the Different Conformational Behavior of Valine, Isoleucine, and Leucine in Aqueous Solution, 1961
Goodman, M. See Lerner, D. B., 2157
Goto, S.
Characterization of Intermediate Conformational States in the B↔Z Transitions of Poly(dG—dC)·Poly(dG—dC), 2211
Govil, G. See Kumar, N. V., 1979, 1995, 2009
Grasdalen, H. See Paoletti, S., 1771
Gray, D. M. See Allen, F. S., 2639, 2661; Edmondson, S. P., 2725
Greulich, K. O. See Ausio, J., 2559
Griffin, K. See Sutherland, J. C., 2715
Grigera, J. R. See de Xammar Oro, J. R., 1457
Grishkovsky, B. A. See Makarov, A. A., 5
Guantieri, V. See Tamburro, A. M., 617
Guschlbauer, W. See Fazakerley, G. V., 961; Hermann, D., 945, 973
Gusse, M. See Kozlowski, H., 1241

Haas, E. See Ausio, J., 2559
Haire, R. N.
—; Tisel, W. A.; White, J. G.; Rosenberg, A.: Precipitation of Proteins by Polymers: The Hemoglobin–Polyethylene Glycol System, 2761
Hakim, M. B.
—; Lindsay, S. M.; Powell, J.: The Speed of Sound in DNA, 1185
Hall, D.
—; Pavitt, N.: Conformation of a Cyclic Tetrapeptide Related to an Analog of Enkephalin, 1441
—; Pavitt, N.: Conformation of Cyclic Analogs of Enkephalin. II. Analogs Containing a Cystine Bridge, 2325
Hall, K. B.
—; Maestre, M. F.: Temperature-Dependent Reversible Transition of Poly(dCdG) · Poly(dCdG) in Ethanolic and Methanolic Solutions, 2127
Hamada, F. See Yamaguchi, S., 995
Hamed, M. M.
—; Mattice, W. L.: Mean-Square Helical Hydrophobic Moments in Partially Ordered Proteins, 1057
—; Mattice, W. L.: Mean-Square Hydrophobic Moment for Partially Helical Polypeptides, 201
Harada, S. See Yamamoto, M., 2083
Harding, S. E.
—; Rowe, A. J.: Modeling Biological Macromolecules in Solution. II. The General Tri-axial Ellipsoid (Erratum), 843
Harrison, R. W.
Variational Calculation of the Normal Modes of a Large Macromolecule: Methods and Some Initial Results (Communication), 2943
Harvey, S. C. See Tung, C.-S., 2173
Hawkes, G. E. See Fazakerley, G. V., 961
Hayashi, H. See Yamaguchi, S., 995
Herman, J.
—; Berendsen, J. C.; Van Gunsteren, W. F.; Postma, J. P. M.: A Consistent Empirical Potential for Water–Protein Interactions, 1513
Hermann, D. See Fazakerley, G. V., 961
—; Fazakerley, G. V.; Guschlbauer, W.: Interaction of Poly(I) and Poly(I)·Poly(C) with Chlorodiethylenetriamino Platinum(II) Chloride, 973
—; Fazakerley, G. V.; Houssier, C.: Interaction of Poly(I)·Poly(C) with *trans*-Dichloro-Diammine-Platinum (II) (Erratum), 1143
—; Fazakerley, G. V.; Houssier, C.; Guschlbauer, W.: Interaction of Poly(I)·Poly(C) with *trans*-Dichloro-Diammine-Platinum(II), 945
Hieta, K.
—; Kuga, S.; Usuda, M.: Electron Staining of Reducing Ends Evidences a Parallel-Chain Structure in *Valonia* Cellulose (Communication), 1807

Higuchi, S.
Interaction of Poly-5-bromouridylic Acid. I. Formation of Helical Complexes with Various Adenine and 2-Aminoadenine Derivatives, 493
—; Yasui, K.: Interaction of Poly-5-bromouridylic Acid. II. Thermodynamic Analysis of its Interaction with Adenosine and 9-Methyladenine, 831
Hoa, G. H. B. See Bonnet, D., 2587
Hol, W. G. J.
—; De Maeyer, M. C. H.: Electrostatic Interactions Between α-Helix Dipoles in Crystals of an Uncharged Helical Undecapeptide, 809
Holtzer, A. See Holtzer, M. E., 1811
Holtzer, M. E.
—; Breiner, T.; Holtzer, A.: Hetero-α-Helical, Two-Chain, Coiled Coils: $\alpha\beta$ Hybrid Tropomyosin, 1811
Horne, D. S.
Steric Effects in the Coagulation of Casein Micelles by Ethanol (Communication), 989
Houben, J. L. See Ciardelli, F., 1423
Houssier, C. See Hermann, D., 945, 1143
Howard, F. B. See Preisler, R. S., 2099
Hsu, S. L. See Sengupta, P. K., 1565
Hudson, B. See Ziegler, L. D., 2067
Huong, P. V.
—; Audry, E.; D. Moras; Thierry, J. C.; Comarmond, M. B.; Giege, R.: Conformational Change in Yeast $tRNA^{Asp}$, 71
Huvos, P.
—; Sasi, R.; Fasman, G. D.: Conformation of Control and Acetylated HeLa Stripped Chromatin after Reassociation with H1, 2195
Hvidt, S.
—; Chang, T.; Yu, H.: Rigidity of Myosin and Myosin Rod by Electric Birefringence, 1283

Iizuka, Y. See Katakai, R., 1411
Ikeda, S. See Imae, T., 2573; Maeda, H., 1333
Ikehara, M. See Cheng, D. M., 775
Il'Icheva, I. A. See Tumanyan, V. G., 2441
Imae, T.
—; Ikeda, S.: Infrared Spectra and Conformation of Monodisperse Oligo-γ-Benzyl-L-Glutamates in Solution, 2573
Imanishi, Y. See Kimura, S., 563
Islam, S. A. See Aggarwal, A., 1025
Iuorno, V. L. See Cheng, D. M., 575; Giessner-Prettre, C., 377

Jackle, H. See Lorenzi, G. P., 1905
James, T. L. See Keepers, J. W., 2499, 2901
Janmey, P. A. See Bale, M. D., 127
Jhon, M. S. See Yoon, C. N., 511
Johnson, W. C., Jr. See Zehfus, M. H., 1269
Jolles, B. See Chinsky, L., 1931

Kahn, L. D.
—; Tu, S.-I.: Electric Birefringence Study of the Purple Membrane of *Halobacterium halobium*, 707
Kajtar, J. See Tomasz, J., 667
Kajtar, M. See Tomasz, J., 667
Kajtar-Peredy, M. See Tomasz, J., 667
Kallenbach, N. R. See Preisler, R. S., 2099
Kan, L.-S. See Cheng, D. M., 575, 775
Kang, Y. K. See Yoon, C. N., 511
Katakai, R.
—; Iizuka, Y.: Conformation of Oligopeptides with L-Leucyl-L-Leucyl-L-Alanyl and L-Methionyl-L-Methionyl-L-Leucyl Repeating Units, 1411
—; Shida, H.; Takada, T.: Synthesis of Oligopeptides Consisting of L-Leucyl-L-Leucyl-L-Alanyl and L-Methionyl-L-Methionyl-L-Leucyl Repeating Units with an Improved Preparation of Nps-Amino Acids, 1397
Kato, H. See Maeda, H., 1333
Kearns, D. R. See Lerner, D. B., 2157
Keepers, J. W.
—; Kollman, P. A.; James, T. L.: Molecular Mechanical Studies of Base-Pair Opening in d(CGCGC):d(GCGCG), dG_5-dC_5, d(TATAT)-d(ATATA), and dA_5-dT_5 in the B and Z Forms of DNA, 2499
—; Schmidt, P.; James, T. L.; Kollman, P. A.: Molecular-Mechanical Studies of the Mismatched Base Analogs of $d(CGCGAATTCGCG)_2$:$d(CGTGAATTCGCG)_2$, $d(CGAGAATTCGCG)_2$, $d(CGCGAATTCACG)_2$, $d(CGCGAATTCTCG)_2$, and d(CGCAGAATTCGCG):d(CGCGAATTCGCG), 2901
Keiderling, T. A. See Sen, A. C., 1519, 1533
Kelleher, M. See Anusiem, A. C. I., 1147
Kimura, M. See Koeppe, R. E., II, 23
Kimura, S.
—; Imanishi, Y.: Ion Transport through Liquid Membrane by Cyclic Octapeptides, 563
King, T. A. See Tipping, M., 2891
Kitamura, K.
—; Mizuno, H.; Amisaki, T.; Tomita, K.-I.; Baba, Y.: Locally Oscillatory Motion of RNA Helix Derived from Linear Relationships of Backbone Torsion Angles, 1169

Kitamura, S.
—; Tanahashi, H.; Kuge, T.: Study of Polysaccharides by the Fluorescence Method. III. Chain Length Dependence of the Micro-Brownian Motion of Amylose in an Aqueous Solution, 1043
Klein, B. J. See Pack, G. R., 2801
Klimkowski, V. J. See Schafer, L., 2335
Kloumann, P. H. B. See Renugopalakrishnan, V., 623
Knauf, M. J. See Burcham, T. S., 1379
Knight, E. T. See Sheridan, R. P., 195
Koeppe, R. E., II
—; Kimura, M.: Computer Building of β-Helical Polypeptide Models, 23
Kollman, P. A. See Keepers, J. W., 2499, 2901; Oatley, S. J., 2931
Kozlowski, H.
—; Aubert, J. P.; Gusse, M.; Chevaillier, P.; Loucheux-Lefebvre, M. H.: Circular Dichroic Studies on Cu(II) Interactions with a Protamine, Scylliorhinine Z_3, 1241
Kraszewski, A. See Foster, K. R., 593
Krimm, S. See Dwivedi, A. M., 923, 2025; Sengupta, P. K., 1565
Kubota, K.
—; Nakatsu, H.; Ohnishi, T.: Photoacoustic Study of Lysozyme in Water (Communication), 2951
Kuga, S. See Hieta, K., 1807
Kuge, T. See Kitamura, S., 1043
Kumar, N. V.
—; Govil, G.: Theoretical Studies on Protein–Nucleic Acid Interactions. I. Interaction of Positvely Charged Amino Acids with Nucleic Acid Fragments, 1979
—; Govil, G.: Theoretical Studies on Protein–Nucleic Acid Interactions. II. Hydrogen Bonding of Amino Acid Side Chains with Bases and Base Pairs of Nucleic Acids, 1995
—; Govil, G.: Theoretical Studies on Protein–Nucleic Acid Interactions. III. Stacking of Aromatic Amino Acids with Bases and Base Pairs of Nucleic Acids, 2009
Kuroda, R. See Aggarwal, A., 1025
Kuwajima, K.
—; Matsushima, T.; Nitta, K.; Sugai, S.: pH-Jump Titration of the Tyrosyl Groups of Bovine Plasma Albumin, 1347
Kypr, J. See Vorlickova, M., 1

Lai, C.-H. See Maurer, P. H., 1141
Laigle, A. See Chinsky, L., 1931
Langridge, R. See Oatley, S. J., 2931
Lapanje, S.
Calculation of the Thermodynamic Quantities of Solvation of Lysozyme and β-Lactoglobulin A in Guanidinium Chloride, 1943
Leberle, K. See Zundel, G., 695
Le Bret, M.
Twist and Writhing in Short Circular DNAs According to First-Order Elasticity, 1835
—; Zimm, B. H.: Distribution of Counterions Around a Cylindrical Polyelectrolyte and Manning's Condensation Theory, 287
—; Zimm, B. H.: Monte Carlo Determination of the Distribution of Ions About a Cylindrical Polyelectrolyte, 271
Lee, D. M.
—; Burnfield, K. E.; Blackwell, J.: Structure of a Cellulose I–Ethylenediamine Complex, 111
Lee, E.
—; Némethy, G.; Scheraga, H. A.; Ananthanarayanan, V. S.: β-Bend Conformation of CH_3CO-Pro-Pro-Gly-Pro-$NHCH_3$: Implications for Posttranslational Proline Hydroxylation in Collagen, 1193
Lee, W. K.
—; Gao, Y.; Prohofsky, E. W.: Structure of Hydrated Na^+ Ions Around A Region of A- or B-DNA Helix, 257
Lees, S. See Cusack, S., 337
Lemeur, D. See Benevides, J. M., 1011
le Pecq, B. See Segal, E., 1623
Lerner, D. B.
—; Becktel, W. J.; Everett, R.; Goodman, M.; Kearns, D. R.: Solvation Effects on the ^{31}P-NMR Chemical Shifts and Infrared Spectra of Phosphate Diesters, 2157
Levy, R. M.
—; Srinivasan, A. R.; Olson, W. K.; McCammon, J. A.: Quasi-Harmonic Method for Studying Very Low Frequency Modes in Proteins, 1099
Lindman, B. See Piculell, L., 1683
Lindsay, S. M. See Hakim, M. B., 1185
Lobachov, V. M. See Makarov, A. A., 5
Lorand, L. See Bale, M. D., 127
Lorenzi, G. P.
—; Gerber, C.; Jackle, H.: Head-to-Head Dimerization of Parallel β Helices in a Synthetic Model of the Linear Gramicidins, 1905
Loucheux-Lefebvre, M. H. See Kozlowski, H., 1241
Lu, M. See Schmitz, K. S., 797, 1637
Lukashin, A. V. See Anshelevich, V. V., 39
Lukton, A. See Band, P., 2223

Maeda, H.
—; Kato, H.; Ikeda, S.: Effect of Cationic Surfactants on the Conformation and Aggregation of Poly(L-glutamic acid), 1333
Maestre, M. F. See Hall, K. B., 2127

Makarov, A. A.
—; Esipova, N. G.; Lobachov, V. M.; Grishkovsky, B. A.; Pankov, Yu. A.: Secondary Structure of Polypeptide Hormones of the Anterior Lobe of the Pituitary Gland, 5
Malcolm, B. R. See Dwivedi, A. M., 2025
Mammi, S. See Michielin, L., 985; Peggion, E., 1225
Mandal, C. See Preisler, R. S., 2099
Manning, G. S. See Friedman, R. A. G., 2671
Marden, M. C. See Bonnet, D., 2587
Martin, A. J.
Low-Frequency Raman Scattering by Anharmonic DNA Modes with A⇌B Character Modeled with a Classical Double-Well Oscillator, 471
Martinez, M. C. L. See de la Torre, J. G., 611
Matsushima, T. See Kuwajima, K., 1347
Matthew, J. B.
—; Richards, F. M.: Differential Electrostatic Stabilization of A-, B-, and Z-Forms of DNA, 2743
Mattice, W. L. See Hamed, M. M., 201, 1057; Overgaard, T., 1595
—; Overgaard, T.; Scheraga, H. A.: Matrix Formulation of the Transition from a Statistical Coil to an Intramolecular Antiparallel β-Sheet, 1701
—; Scheraga, H. A.: Suppression of the Statistical Coil State during the $\alpha \leftrightarrow \beta$ Transition in Homopolypeptides, 2879
Maurer, P. H.
—; Babu, U. M.; Lai, C.-H.; Anderson, J.; Merryman, C. F.: Contributions of Synthetic Polymers of Amino Acids to Knowledge of Immune Response (Erratum), 1141
Mazet, J. See Rochas, C., 2825
Mazur, A. K.
Mathematical Models of Depolymerization of Amylose by α-Amylases, 1735
Most-Probable Distribution at Enzyme Depolymerization of Polysaccharides, 859
Mazzarella, L. See Capasso, S., 1085
Mazzei, F.
—; Onori, G.: Cation-Induced Conformational Changes in tRNA Molecules, 759
McCammon, J. A. See Allison, S. A., 167, 363; Levy, R. M., 1099; Tung, C.-S., 2173
McLachlan, A. D.
How Alike are the Shapes of Two Random Chains?, 1325
Mehlis, B. See Rueger, M., 747
Merryman, C. F. See Maurer, P. H., 1141
Michielin, L.
—; Peggion, E.; Mammi, S.: Macromolecularization of a Tripeptide Analog of the Cu(II) Binding Site of Human Serum Albumin. I. Synthesis, Conformation, and Binding Properties of a Gly-Gly-His Derivative of Poly(L-Lysine) (Erratum), 985
Miles, H. T. See Preisler, R. S., 2099
Miller, K. J. See Newlin, D. D., 139; Taylor, E. R., 2853
Miller, P. S. See Wierzchowski, K. L., 2361
Miller, W. G. See Chakrabarti, S., 719
Mimura, M. See Ueda, K., 1667
Minyat, E. E. See Vorlickova, M., 1
Mitra, A. K.
—; Chandrasekaran, R.: Conformational Flexibilities in Malformin A, 2513
Miyata, T. See Saitô, H., 2279
Mizuno, H. See Kitamura, K., 1169
Momany, F. A. See Schafer, L., 2335
Moroder, L. See Peggion, E., 1225
Morosetti, S. See Chiavarini, S., 1547
Muller, M. F.
—; Ferry, J. D.: Stress Relaxation in Fine Fibrin Films: Comparison of Films Prepared with Thrombin and Ancrod, 2311
Murthy, N. S.
Liquid Crystallinity in Collagen Solutions and Magnetic Orientation of Collagen Fibrils, 1261
Muzard, G. See Segal, E., 1623

Nakajima, A. See Yamaguchi, S., 995
Nakatsu, H. See Kubota, K., 2951
Nakazawa, A. See Yamamoto, H., 1367
Neidle, S. See Aggarwal, A., 1025
Nelson, H. P., Jr.
—; DeVoe, H.: Physical Binding of Pyrene and Phenanthrene to Native and Denatured DNA: Measurements by Spectral and Coupled-Column Liquid Chromatography Methods, 897
Nelson, J. W.
—; Tinoco, I., Jr.: Intercalation of Ethidium Ion into DNA and RNA Oligonucleotides, 213
Némethy, G. See Lee, E., 1193
—; Scheraga, H. A.: Role of Proline···Proline Interactions in the Packing of Collagenlike Poly(tripeptide) Triple Helices, 2781
Newlin, D. D.
—; Miller, K. J.; Pilch, D. F.: Interactions of Molecules with Nucleic Acids. VII. Intercalation and T·A Specificity of Daunomycin in DNA, 139
Newman, J.
Dynamic Light Scattering as a Probe of Superhelical DNA–Intercalating Agent Interaction, 1113
Neyfack, Y. A. See Tumanyan, V. G., 2441
—; Tumanyan, V. G.: Potential-Energy

Surface for Double-Helical DNA with Watson–Crick Pairs. I. Complete Scanning in the Space of Torsion Angles, 2419
Nitta, K. See Kuwajima, K., 1347

Oatley, S. J.
—; Blaney, J. M.; Langridge, R.; Kollman, P. A.: Molecular-Mechanical Studies of Hormone–Protein Interactions: The Interaction of T_4 and T_3 with Prealbumin, 2931
Oboodi, M. R. See Diem, M., 1917
Ohnishi, T. See Kubota, K., 2951
Olson, W. K. See Levy, R. M., 1099
Onori, G. See Mazzei, F., 759
Osuga, D. T. See Burcham, T. S., 1379
Overgaard, T.
—; Erie, D.; Darsey, J. A.; Mattice, W. L.: Helix Formation by Hydroxyamyl-L-Glutaminyl Residues in Water and Aqueous Sodium Dodecyl Sulfate, 1595
Ozaki, T. See Saitô, H., 2279

Pack, G. R.
—; Klein, B. J.: Generalized Poisson-Boltzmann Calculation of the Distribution of Electrolyte Ions Around the B- and Z-Conformers of DNA, 2801
Palleschi, A. See Chiavarini, S., 1547
Palumbo, M. See Peggion, E., 1225
Pankov, Yu. A. See Makarov, A. A., 5
Paoletti, S.
—; Smidsrod, O.; Grasdalen, H.: Thermodynamic Stability of the Ordered Conformations of Carrageenan Polyelectrolytes, 1771
Pastore, A.
—; Temussi, P. A.; Tancredi, T.; Salvadori, S.; Tomatis, R.: Proton Magnetic Resonance Studies on Dermorphin and Its Peptide Fragments, 2349
Pavitt, N. See Hall, D., 1441, 2325
Peggion, E. See Michielin, L., 985
—; Mammi, S.; Palumbo, M.; Moroder, L.; Wunsch, E.: Interaction of Metal Ions with Gastrointestinal Hormones: Binding Studies of Mg^{++} to Biologically Active Analogs of Little Gastrin and Minigastrin, 1225
Peticolas, W. L. See Ziegler, L. D., 2067
Piculell, L.
—; Lindman, B.; Einarsson, R.: Counterion Binding and Hydration of Hyaluronate and Chondroitin in Solution: An ^{17}O, ^{23}Na, and ^{25}Mg Nuclear-Magnetic-Relaxation Study, 1683
Pieroni, O. See Ciardelli, F., 1423
Pilch, D. F. See Newlin, D. D., 139
Pispisa, B.
—; Farinella, M.: Polypeptide Matrices as Active Catalytic Supports for Stereoselective Electron-Transfer Reactions, 1465
Pohle, W.
—; Zhurkin, V. B.; Fritzsche, H.: The DNA Phosphate Orientation. Infrared Data and Energetically Favorable Structures, 2603
Poole, P. L.
—; Finney, J. L.: Sequential Hydration of Dry Proteins: A Direct Difference IR Investigation of Sequence Homologs Lysozyme and α-Lactalbumin, 1647
Post, C. B.
A Monte-Carlo Estimate of DNA Loop Formation, 601
Postma, J. P. M. See Herman, J., 1513
Powell, J. See Hakim, M. B., 1185
Prado, F. R. See Giessner-Prettre, C., 377
Prasad, K. V. D.
—; Prohofsky, E. W.: Low-Frequency Lattice Mode Predictions in A-DNA Compared to Experimental Observations and Significance for A-toB Conformation Change (Communication), 1795
Preisler, R. S.
—; Mandal, C.; Englander, S. W.; Kallenbach, N. R.; Frazier, J.; Miles, H. T.; Howard, F. B.: Premelting and the Hydrogen-Exchange Open State in Synthetic RNA Duplexes, 2099
Prescott, B.
—; Steinmetz, W.; Thomas, G. J., Jr.: Characterization of DNA Structures by Laser Raman Spectroscopy, 235
Prohofsky, E. W. See Lee, W. K., 257; Prasad, K. V. D., 1795
Pullman, B. See Giessner-Prettre, C., 377
Purisima, E. O.
—; Scheraga, H. A.: Conversion from a Virtual-Bond Chain to a Complete Polypeptide Backbone Chain, 1207
Pushpa, S.
—; Srinivasan, R.: Polyelectrolyte Complexes of Glycol Chitosan with Some Mucopolysaccharides: Dielectric Properties and Electrical Conductivity, 59

Radics, L. See Tomasz, J., 667
Ramsay, D. J. See Schmitz, K. S., 1637
Rashin, A. A.
Buried Surface Area, Conformational Entropy, and Protein Stability, 1605
Ratliff, R. L. See Allen, F. S., 2639
Renugopalakrishnan, V. See Diem, M., 2955
—; Kloumann, P. H. B.; Bhatnagar, R. S.: L-Alanyl-Glycylglycine:FT-IR and Raman Spectroscopic Evidence for Tripeptide Packing in a Collagenlike Arrangement (Communication), 623

Reynolds, C. See Bi, R. C., 391
Richard, A. J.
The Effects of Alkali-Metal Chlorides and of Spermidine and Spermine on the Swelling Pressures of DNA Gels in the Ultracentrifuge, 1307
Richards, F. M. See Matthew, J. B., 2743
Rinaudo, M. See Rochas, C., 735
Rizzo, V.
—; Schellman, J. A.: Matrix-Method Calculation of Linear and Circular Dichroism Spectra of Nucleic Acids and Polynucleotides, 435
Rochas, C.
—; Mazet, J.: The Conformational Transition of κ-Carrageenan Using Microcalorimetry, 2825
—; Rinaudo, M.: Mechanism of Gel Formation in κ-Carrageenan, 735
Rosenberg, A. See Haire, R. N., 2761
Rowe, A. J. See Harding, S. E., 843
Rueger, M.
—; Bienert, M.; Mehlis, B.; Gast, K.; Zirwer, D.; Behlke, J.: Self-Association of the Neuroregulatory Peptide Substance P and Its C-Terminal Sequences, 747
Ryan, D. P.
—; Crothers, D. M.: Relaxation Kinetics of DNA–Ligand Binding Including Direct Transfer, 537

Saitô, H.
—; Tabeta, R.; Shoji, A.; Ozaki, T.; Ando, I.; Miyata, T.: A High-Resolution ^{13}C-nmr Study of Collagenlike Polypeptides and Collagen Fibrils in Solid State Studied by the Cross-polarization–Magic Angle-Spinning Method. Manifestation of Conformation-Dependent ^{13}C Chemical Shifts and Application to Conformational Characterization, 2279
Salvadori, S. See Pastore, A., 2349
Sano, T. See Yamamoto, M., 2083
Sasaki, N.
Dielectric Properties of Slightly Hydrated Collagen: Time–Water Content Superposition Analysis, 1725
Sasi, R. See Huvos, P., 2195
Schafer, L.
—; Klimkowski, V. J.; Momany, F. A.; Chuman, H.; Van Alsenoy, C.: Conformational Transitions and Geometry Differences Between Low-Energy Conformers of *N*-Acetyl-*N'*-Methyl Alanine amide: An *ab initio* Study at the 4-21G Level with Gradient Relaxed Geometries, 2335
Schellman, J. A. See Rizzo, V., 435
Scheraga, H. A. See Go, M., 1961; Lee, E., 1193; Mattice, W. L., 1701, 2879; Nemethy, G., 2781; Purisima, E. O., 1207
Schmidt, P. See Keepers, J. W., 2901
Schmitz, K. S.
—; Lu, M.: Quasielastic Light-Scattering Studies on Dinucleosomal-Sized DNA: Ionic-Strength Dependence, 797
—; Singh, N.; Ramsay, D. J.; Lu, M.: Comments on the "Ordinary–Extraordinary Phase Transition" of Poly(lysine), 1637
Schurr, J. M. See Wilcoxon, J., 767, 1137
Comment on Breathing and Bending in DNA (Communication), 191
Segal, E.
—; Girault, J.-P.; Muzard, G.; Chottard, G.; Chottard, J.-C.; le Pecq, B.: Structure Determination of the Adduct Formed Between the Signal Nucleotide Diadenosine 5′,5‴-P_1, P_4-Tetraphosphate (Ap_4A) and *cis*-$[Pt(NH_3)_2Cl_2]$, 1623
Segawa, S-I.
—; Sugihara, M.: Characterization of the Transition State of Lysozyme Unfolding. II. Effects of the Intrachain Crosslinking and the Inhibitor Binding on the Transition State, 2489
—; Sugihara, M.: Characterization of the Transition State of the Lysozyme Unfolding. I. Effect of Protein–Solvent Interactions on the Transition State, 2473
Sen, A. C.
—; Keiderling, T. A.: Vibrational Circular Dichroism of Polypeptides. II. Solution Amide II and Deuteration Results, 1519
—; Keiderling, T. A.: Vibrational Circular Dichroism of Polypeptides. III. Film Studies of Several α-Helical and β-Sheet Polypeptides, 1533
Sengupta, P. K.
—; Krimm, S.; Hsu, S. L.: Vibrational Analysis of Peptides, Polypeptides, and Proteins. XXI. β-Calcium-Poly(L-Glutamate), 1565
Sheridan, R. P.
—; Knight, E. T.; Allen, L. C.: The Effect of Deuterium Substitution on Hydrogen Bonds in Redox Proteins (Communication), 195
Shida, H. See Katakai, R., 1397
Shida, T. See Cheng, D. M., 775
Shimada, J.
—; Yamakawa, H.: DNA–Topoisomer Analysis on the Basis of the Helical Wormlike Chain (Communication), 853
Shin, Y. A.
—; Eichhorn, G. L.: Formation of ψ(+) and ψ(−) DNA, 325
Shoji, A. See Saitô, H., 2279
Singh, N. See Schmitz, K. S., 1637
Smidsrod, O. See Paoletti, S., 1771
Srinivasan, A. R. See Levy, R. M., 1099
Srinivasan, R. See Pushpa, S., 59

Starzak, M.
—; Cohen, M.: Eu(III) Ion Binding to Poly(L-Glutamate) Anion Studied by Environment-Sensitive Laser Spectroscopy (Communication), 847
Staskus, P. W. See Allison, S. A., 2835
Steiner, R. F.
Quantitative Aspects of the Development of a Hydrophobic Binding Site on Calmodulin by Calcium Binding, 1121
Steinmetz, W. See Prescott, B., 235
Stigter, D. See Bustamante, C., 629
Strommen, D. P. See Ziegler, L. D., 2067
Stuchly, M. A. See Foster, K. R., 593
Stuchly, S. S. See Foster, K. R., 593
Sudha, T. S. See Vijayakumar, E. K. S., 877
Sugai, S. See Kuwajima, K., 1347
Sugihara, M. See Segawa, S-I., 2473, 2489
Sutherland, J. C.
—; Griffin, K.: Magnetic Circular Dichroism of Adenine, Hypoxanthine, and Guanosine 5′-Diphosphate to 180 nm, 2715
Suyama, A.
—; Wada, A.: Unwinding Kinetics of Cooperatively Melting Regions in DNA, 409

Tabeta, R. See Saitô, H., 2279
Taboury, J. See Chinsky, L., 1931
Taillandier, E. See Chinsky, L., 1931
Takada, T. See Katakai, R., 1397
Tamburro, A. M.
—; Guantieri, V.: Folded β-Turns and Collagenlike Conformations of -Gly-Pro- and -Pro-Gly- Sequences in Synthetic Polytripeptides (Communication), 617
Tanahashi, H. See Kitamura, S., 1043
Tancredi, T. See Capasso, S., 1085; Pastore, A., 2349
Tatsumoto, N. See Yamamoto, M., 2083
Taylor, E. R.
—; Miller, K. J.: Interactions of Molecules with Nucleic Acids. XI. Generalization of Techniques to Generate Nucleic Acid Structures with Applications to Intercalation Sites and Kinked Structures, 2853
Temussi, P. A. See Pastore, A., 2349
Thierry, J. C. See Huong, P. V., 71
Thiyagarajan, P.
—; Borso, C. S.; Banerjee, A.; Cooperman, B. S.: Small-Angle X-Ray Scattering Studies on Yeast Inorganic Pyrophosphatase and its Interactions with Divalent Metal Ions, Inorganic Phosphate, and Hydroxymethane Bisphosphonate, 159
Thomas, G. J., Jr. See Benevides, J. M., 1011; Prescott, B., 235
Thomas, T. J.
—; Bloomfield, V. A.: Ionic and Structural Effects on the Thermal Helix–Coil Transition of DNA Complexed with Natural and Synthetic Polyamines, 1295
Thorn, I.
—; Eagland, D.: Studies of Collagen Fold Formation in Aqueous Solutions of α-Gelatin III, 353
Tinoco, I., Jr. See Nelson, J. W., 213
Tipping, M.
—; Viras, K.; King, T. A.: Low-Frequency Dynamics of Solid Poly(L-alanine) from Raman Spectroscopy, 2891
Tirado, M. M. See de la Torre, J. G., 611
Tisel, W. A. See Haire, R. N., 2761
Tobias, I.
Circular Dichroism of Core DNA in Mononucleosomes: A Theoretical Model, 1315
Tomasz, J.
—; Barabas, K.; Bottka, S.; Kajtar, J.; Kajtar, M.; Kajtar-Peredy, M.; Radics, L.: Conformational Studies of Adenosine 5′-Phosphorodiamidates in Aqueous Solution, 667
Tomatis, R. See Pastore, A., 2349
Tomita, K.-I. See Kitamura, K., 1169
Tonelli, A. E.
^{13}C-NMR Chemical Shifts and the Conformations of Rigid Polypeptides, 819
Tow, F. See Chen, C.-H., 887
Ts'o, P. O. P. See Cheng, D. M., 575, 775; Giessner-Prettre, C., 377
Tu, S.-I. See Kahn, L. D., 707
Tumanyan, V. G. See Neyfack, Y. A., 2419
—; Abagyan, R. A.; Esipova, N. G.: Conformational Analysis of Polytripeptides (Gly-Pro-Ala)$_n$, (Gly-Ala-Hyp)$_n$, and (Gly-Ala-Ala)$_n$ in Connection with the Problem of Collagen Structure, 1499
—; Neyfack, Y. A.; Il'Icheva, I. A.: Potential-Energy Surface for Double-Helical DNA with Watson–Crick Base Pairs. II. Complete Energy Minimization Study, 2441
Tung, C.-S.
—; Harvey, S. C.; McCammon, J. A.: Large-Amplitude Bending Motions in Phenylalanine Transfer RNA, 2173
Turpin, P. Y. See Chinsky, L., 1931
Tvaroska, I.
Theoretical Studies on the Conformation of Saccharides. VIII. Solvent Effect on the Stability of β-Cellobiose Conformers, 1951

Ueda, K.
—; Mimura, M.; Yamaoka, K.: Reversing-Pulse Electric Birefringence of poly(γ-Benzyl-L-Glutamate). II. Field-Strength Dependence of Steady-State and Decay Signals of Well-Fractionated Samples, 1667
Uesugi, S. See Cheng, D. M., 775
Usuda, M. See Hieta, K., 1807

Van Alsenoy, C. See Schafer, L., 2335
Van Gunsteren, W. F. See Herman, J., 1513
Van Zandt, L. L. See Dorfman, B. H., 913
Vijayakumar, E. K. S.
—; Sudha, T. S.; Balaram, P.: Circular Dichroism Studies of α-Aminoisobutyric Acid-Containing Peptides: Chain Length and Solvent Effects in Alternating Aib-L-Ala and Aib-L-Val Sequences, 877
Viras, K. See Tipping, M., 2891
Vologodskii, A. V. See Anshelevich, V. V., 39
Vorlickova, M.
—; Minyat, E. E.; Kypr, J.: Cooperative Changes in the Chiroptical Properties of DNA Induced by Methanol (Communication), 1

Wachtel, E. See Ausio, J., 2559
Wachtel, W. See Ausio. J., 2559
Wada, A. See Suyama, A., 409
Warren, R. A. J. See Wilcoxon, J., 767
Wartell, R. M.
—; Benight, A. S.: Fluctuational Base-Pair Opening in DNA at Temperatures Below the Helix–Coil Transition Region (Erratum), 1137
Weaver, D. L.
Alternative Pathways in Diffusion–Collision Controlled Protein Folding, 675
Wegener, W. A.
Viscoelasticity of Rigid Macromolecules with Irregular Shapes in the Limit of Overwhelming Brownian Motion, 2243
White, J. G. See Haire, R. N., 2761
Wierzchowski, K. L.
—; Zielenkiewicz, A.; Miller, P. S.: Calorimetric Study of 2U:1A Three-Stranded Complexes Formed between Poly(U) and Adenine Dinucleotides: ApA and Diastereoisomers of Nonionic Adenine Dideoxyribonucleoside Methyl Phosphonate, 2361
Wilcoxon, J.
—; Schurr, J. M.: Temperature Dependence of the Dynamic Light Scattering of Linear φ29 DNA: Implications for Spontaneous Opening of the Double-Helix (Erratum), 1137
—; Schurr, J. M.; Warren, R. A. J.: The Titratable Joint Phenomenon in ΦW-14 DNA, 767
Wunsch, E. See Peggion, E., 1225
Wynants, C.
—; Binst, G. V.: Homonuclear Two-Dimensional Correlated Spectra with Delays as an Aid for the Assignment of Aromatic Residues and for Sequencing of Peptides (Communication), 1799

Yamaguchi, S.
—; Hayashi, H.; Hamada, F.; Nakajima, A.: Conformation Study on Heparin by Intermediate-Angle X-Ray Scattering, 995
Yamakawa, H. See Shimada, J., 853
Yamamoto, H.
—; Nakazawa, A.: Induced Optical Activity in the Complex of Poly(L-arginine) with Azo Dyes, 1367
Yamamoto, M.
—; Harada, S.; Sano, T.; Yasunaga, T.; Tatsumoto, N.: Kinetic Studies of the Complex Formation in the Ternary System of Amylose, SDS, and Iodine, 2083
Yamaoka, K. See Ueda, K., 1667
Yasui, K. See Higuchi, S., 831
Yasunaga, T. See Yamamoto, M., 2083
Yeh, Y. See Burcham, T. S., 1379
Yielding, K. L. See Coffman, G. L., 1067; Yielding, L. W., 83
Yielding, L. W. See Coffman, G. L., 1067
—; Yielding, K. L.; Donoghue, J. E.: Ethidium Binding to Deoxyribonucleic Acid: Spectrophotometric Analysis of Analogs with Amino, Azido, and Hydrogen Substituents, 83
Yoon, C. N.
—; Kang, Y. K.; Jhon, M. S.: Conformational Study of Trinucleoside Tetraphosphate d(pCpGpCp): Transition of Right-Handed Form to Left-Handed Form, 511
Yu, H. See Hvidt, S., 1283

Zagari, A. See Capasso, S., 1085
Zehfus, M. H.
—; Johnson, W. C., Jr.: Conformation of P-Form DNA, 1269
Zhurkin, V. B. See Pohle, W., 2603
Ziegler, L. D.
—; Hudson, B.; Strommen, D. P.; Peticolas, W. L.: Resonance Raman Spectra of Mononucleotides Obtained with 266- and 213-nm Ultraviolet Radiation, 2067
Zielenkiewicz, A. See Wierzchowski, K. L., 2361
Zimm, B. H. See Le Bret, M., 271, 287

Zirwer, D. See Rueger, M., 747
Zundel, G. See Bandekar, J., 2623
—; Leberle, K.: Proton Polarizability of Poly(L-tyrosine)–Hydrogen Phosphate Hydrogen Bonds as a Function of Alkali

Subject Index

Research Communications and Errata are denoted by C and E, respectively, following the page number

Ab initio study, of *N*-acetyl-*N*-methylalanyl conformations, 2335
Acetylation, of chromatin, 2195
N-Acetyl-*N*-methylalanyl amide, *ab initio* conformational study, 2335
Acoustic modes, of DNA, 1185
—, of DNA fiber, 913
Acoustic velocity, in hydrated collagen fibers, 337
Actinomycin, equilibria for DNA binding, 2671
Activation enthalpy, for spectrin ^{3}H-exchange, 2587
Adenine, complexes with poly(5-bromouridylic acid), 493
—, magnetic CD of, 2715
Adenine dinucleotides, three-stranded complexes with poly(U) nonionic analogs of, 2361
Adenosine, thermodynamics of poly(BU) binding, 831
Adenosine 5′-phosphorimidates, conformational studies of, 667
Agarose gels, RNA and DNA migration in, 2725
Aggregation, of κ-carrageenan, 735
—, of poly(γ-benzyl-L-glutamate), 719
—, self, of substance P, 747
—, surfactant effects in poly(L-Glu), 1333
Ala-Gly-Gly, collagenlike conformation of, 623(C)
Alamethicin analog, interaction of helix dipoles in, 809
Alanyl peptides, diastereomeric, vibrational coupling in, 1917
Albumin, analog of Cu-binding site, 985(E)
—, bovine plasma, titration of tyrosines of, 1347
Alkalinity, effect on amylose helicity, 2525
Amide I, vibrational CD of film, 1533
Amide I band, vibrational CD in solution, 1519
Amide II, vibrational CD of film, 1533
Amide II band, vibrational CD in solution, 1519
Amide A, vibrational CD of film, 1533
Amide bonds, *cis* vs *trans* in malformin A, 2513
Amino acid residues, H-bonding to nucleic acids, 1995
9-Aminoacridine, intercalation into DNA, 629
α-Aminoisobutyric acid, in $(Aib\text{-}X)_n$ peptides, 877
—, conformation of homopolymer, 2025
Amphiphilic helices, diagnosis of, 201
—, hydrophobic moment treatment, 1057
α-Amylases, mathematical model of action, 1735
Amylose, complex with iodine, SDS, 2083
—, conjugated with fluorescein, 1043
—, electron spin resonance study, 2543
—, fluorescence depolarization of, 2543
—, helical conformation of, 2525, 2543
—, micro-Brownian motion of, 1043
—, models for depolymerization of, 1735
—, sedimentation of, 2543
—, viscosity of, 2525
Ancrod, relaxation in fibrin films prepared with, 2311
Angular distribution, of fluorescent probes, 2383
Antifreeze glycoproteins, dimerization of, 1379
—, ice crystalline habit and activity, 1379
—, length and activity of, 1379
Antiparallel β-sheet, statistical coil conversion to, 1701
Arginine, nucleic acid complexation, 1979
—, protamine rich in, 2559
—, sequential polypeptides with His, Leu, 2299
Aromatic amino acids, nucleic acid stacking, 2009
Aromatic residues, assigned by long-range coupling, 1799(C)
Assignment, ^{31}P-nmr, of deoxyribonucleotides, 575
Association, self, of substance P, 747
Auramine O, hydrolysis catalyzed by heparin, 2223
Azobenzene, *p*-amino, poly(Glu) derivatized with, 1423

Backbone, peptide, built using C^α coordinates, 1207
Bacteriorhodopsin, 707
—, α_{II}-helix structure of, 923

Base-pair opening, energy for, 1137(E)(E)
Base pairs, nucleic acid, simulation of opening, 2499
Bases, DNA, tilt and twist angles of, 2603
—, nucleic acid, aromatic amino acid stacking, 2009
—, nucleic acid, H-bonding to amino acids, 1995
—, nucleic acid, stability of mismatched (wobble) pairs, 2901
Bending, of DNA, 191(C)
β-Bend probability, for collagen peptides, 1193
Bends, large-amplitude, in $tRNA^{Phe}$, 2173
γ-Benzyl-glutamate oligomers, ir conformational study, 2573
Bond order, in nucleotide excited states, 2067
Bovine Pancreatic Trypsin Inhibitor, generation of coordinates of, 1207
β-Branched residues, conformational effects of hydration, 1961
Breathing, of DNA, 191(C)
Brillouin scattering, in collagen acoustic velocity measurement, 337
—, of DNA, 1185
Brownian dynamics, of wormlike chains, 363
Brownian dynamics simulation, of rigid and flexible structures, 167
Brownian motion, micro, of amylose segments, 1043
—, viscoelasticity at high limit of, 2243

Calcium, calmodulin changes on binding, 1121
CNDO/2 calculations, of diketopiperazine flexibility, 397
Calmodulin, changes upon Ca^{+2} binding, 1121
—, hydrophobic binding site in, 1121
Carbazole analysis, of hyaluronate, 647
Carrageenan, ι- and κ-, conformational transitions of, 1771
—, ι- and κ-, thermodynamic stability of, 1771
κ-Carrageenan, conformational transition in, 2825
—, microcalorimetry of, 2825
Casein micelles, ethanol coagulation, 989(C)
Catalysis, of electron transfer by Fe(III) complexes, 1465
—, polyelectrolyte, by heparin, 2223
Cations, divalent, effect on tRNA conformation, 759
—, effect on carrageenan gelation, 735
—, Na^+ and Mg^{2+}, stabilization of DNA gels, 2141
—, and poly(L-Tyr) H-bonding, 695
Cation transport, by cyclic octapeptide, 563
CD, of acetylated chromatin–H1 complex, 2195
—, of adenosine 5′-phosphorimidates, 667
—, of $(Aib\text{-}X)_n$ peptides, 877
—, of Ap_4A-*cis*-platinum complex, 1623
—, of Arg, His, Leu sequential polypeptide, 2299
—, of azobenzene-derivatized poly(L-Glu), 1423
—, calculated, of nucleic acids, 435
—, of $d\text{-}(CCG)_2$ and $d\text{-}(CG)_3$ helices, 775
—, of chromatin, 1315
—, of collagen model peptides, 617(C)
—, of L-Cys-L-Cys cyclic disulfides, 1085
—, of ψ-DNA conformers, 325
—, of DNA in methanol, 1(C)
—, DNA-ligand binding sites resolved by, 2661
—, of Eu^{+3}-poly(L-Glu) binding, 847(C)
—, first-neighbor analysis for DNA, 2639, 2661
—, of hydrophobic oligopeptides, 1411
—, of hydroxyalkyl-Glyn peptides, 1595
—, induced, of poly(L-Arg)—dye complex, 1367
—, magnetic, of purines, 2715
—, of Mg^{2+} complexes with gastrins, 1225
—, of nucleosomes, 1315
—, of nucleotide–dien-Pt complexes, 973
—, of P-form DNA, 1269
—, of pituitary hormones, 5
—, of poly(5-bromouridylic acid) complexes, 493
—, of poly(dCdG)-poly(dCdG) transitions, 2127
—, of poly(dG—dC)-poly(dG—dC), 2211
—, of poly(L-Glu) aggregates, 1333
—, of poly(I)-poly(C)–*trans*-Pt complexes, 945
—, of premelting in RNA, 2099
—, of protamine–Cu(II) complex, 1241
—, of substance P aggregates, 747
—, vibrational, of α-helical polypeptides, 1519
—, vibrational, of polypeptide films, 1533
—, vibrational, of β-sheet polypeptides, 1533
CD spectrum, theoretical, for collagen, 1891
β-Cellobiose, solvent effect on conformers of, 1951
Cellulose, ethylenediamine complex, 111
—, *Valonia*, parallel chain structure in, 1807(C)
—, x-ray diffraction of, 111
$d\text{-}(CG)_n$ helices, ^1H- and ^{31}P- studies, 775
Chelate, of *cis*-$[Pt(NH_3)_2Cl_2]$ with Ap_4A, 1623
Chemical shifts, ^{13}C-, effect of substitution on, 819
—, ^{13}C-, in solids and solutions, 819
—, ^{13}C-, of rigid polypeptides, 819
—, ^{31}P-nmr in phosphate esters, 377
Chondroitin, ^{23}Na nmr study of counterion binding, 1683
—, ^{17}O nmr study of hydration, 1683
Chondroitin sulfates, glycol chitosan complexes, 59
Chromatin, acetylated and control, CD of histone H1 complexes, 2195
—, photoaffinity labeling of, 1067

—, theory of CD, 1315
Circular DNA, superhelix in, 2963(C)
—, topoisomer distribution, 853(C)
—, twist and writhing in, 1835
Coiled coils, α-helical, interaction between, 1811
Collagen, Ala-Gly-Gly as model of, 623(C)
—, C-terminal peptide of, 313
—, fibrillogenesis of, 313
—, hydrated, dielectric properties of, 1725
—, role of proline in helix-packing of, 2781
—, theoretical CD, LD, and uv spectra, 1891
Collagen analogs, Raman study of, 2955(C)
Collagen fibers, acoustic velocity in, 337
—, hydration and flexibility of, 337
Collagen fibrils, ^{13}C-nmr study of, 2279
—, magnetic orientation in, 1261
Collagen folding, effect of alcohols on, 353
—, kinetics of, 353
Collagenlike polypeptides, ^{13}C-nmr study of, 2279
Collagen model peptides, β-bends in, 1193
Collagen model polymers, conformational analysis of, 1499
Collagen models, CD studies of, 617(C)
Collagen solution, liquid crystallinity of, 1261
Computer building, of β-helical peptides, 23
Computer generation, of distorted nucleic acid structures, 2853
Computer model building based on C^{α} coordinates, 1207
Computer simulation, of B-to-Z transition in trinucleotide, 511
—, of collagen model polymers, 1499
—, comparing random coil structures, 1325
—, of cyclic enkephalin analog, 1441
—, of DNA hydration, 257
—, of wormlike chains, 363
Conductivity, of hydrated collagen, 1725
Conformation, of acetylated chromatin–H1 complex, 2195
—, of $(Aib\text{-}X)_n$ peptides, 877
—, and amphiphilicity in proteins, 1057
—, of Arg, His, Leu sequential polypeptides, 2299
—, of d-$(CCG)_2$ and d-$(CG)_3$ helices, 775
—, of collagen analogs by Raman, 2955(C)
—, of collagenlike polypeptides, 2279
—, of cyclic enkephalin analog, 1441
—, of L-Cys-L-Cys cyclic disulfides, 1085
—, of dermorphin analogs, 2349
—, of DNA, 2419, 2441
—, DNA, Raman characterization of, 235
—, of hydroxyalkyl-Gln peptides, 1595
—, of LiDNA, 1757
—, of malformin A, 2513
—, of oligo-γ-benzyl-glutamates, 2573
—, peptide, through vibrational coupling, 1917
—, of P-form DNA, 1269
—, of poly(U) in D_2O, 2623
—, protein, compared for random coils, 1325
—, of purine nucleotides, 1011
—, tRNA, effect of cations, 759
—, of yeast tRNA–aspartate, 71
Conformational analysis, of collagen model polymers, 1499
—, of DNA, 2603
Conformational change, in calmodulin on Ca^{+2} binding, 1121
—, light-induced, in photochromic peptides, 1423
—, in RNA helix, 1169
—, topological aspects in proteins, 1547
Conformational energy, of collagen model peptides, 1193
Conformational energy calculation, of enkephalin analogs, 2325
—, solvent effect in, 1951
Conformational energy calculations, on packing of triple helices, 2781
—, on $tRNA^{Phe}$, 2173
Conformational entropy, of protein folding, 1605
Conformational restriction, in cyclic enkephalin analog, 1441
Conformational study, of heparin, 995
Conformational transition, $\alpha \leftrightarrow \beta$, matrix treatment of, 2879
—, salt-induced, in κ-carrageenan, 2825
Conformations, of B- and Z-DNA, 511
—, intermediate, in B–Z transition of DNA, 2211
Conformers, low energy, of *N*-acetyl-*N*-methylalanyl, 2335
Cooperativity, in DNA unwinding, 409
Coordination, of dien-Pt to DNA, 973
—, of *trans*-$Pt(NH_3)_2Cl_2$ to nucleotides, 945, 961
Copolypeptides, sequential, hydrophobic moment of, 201
Copper(II), complex with protamine, 1241
—, tripeptide binding site for, 985(E)
COSY spectra, use of long-range coupling in, 1799(C)
Coulombic interactions, of basic residues with DNA fragments, 1979
Counterion binding, by ^{23}Na nmr, 1683
Counterion condensation, effects on helix–coil transition, 1771
—, in glycosaminoglycans, 2223
Counterion distribution, around B- and Z-DNA, 2801
Counterions, condensation with polyelectrolyte, 287
—, distribution about polyelectrolyte, 271
—, in DNA hydration, 257
Coupling, long-range, assignment of aromatic residues by, 1799(C)

—, vibrational, study of peptide conformation, 1917
Cross-β fibers, statistical coil conversion to, 1701
Crosslinking, effect on lysozyme folding, 2489
—, nucleotide, by dien-Pt, 973
—, nucleotide, by *trans*-$Pt(NH_3)_2Cl_2$, 945, 961
Cross-polarization–magic-angle spinning, of collagen fibrils, 2279
—, of collagenlike polypeptides, 2279
Cyclic disulfides, conformations in solution, 1085
Cyclic nucleotides, conformation of, 1011
—, ^{31}P-nmr chemical shifts, 2157
Cyclic octapeptide, cation transport by, 563
Cyclic peptides, ^{13}C-chemical shifts in, 819
—, related to enkephalin, 2325
—, simulation of malformin A, 2513
Cyclic tetrapeptide, conformation of, 1441
L-Cysteinyl-L-cysteine cyclic disulfides, synthesis and properties, 1085
Cystine bridge, enkephalin analogs containing, 2325

Damping, of DNA fiber vibration, 913
Daunomycin, DNA base specificity of daunomycinone complex, 139
Degree of polymerization, and miro-Brownian motion in amylose, 1043
Denaturants, effect on lysozyme unfolding, 2473
Denaturation, thermal, of control and acetylated chromatin, 2195
Deoxyoligonucleotides, ^{31}P-nmr studies, 575
Depolymerization, amylose, mathematical models for, 1735
—, polysaccharide, product distribution from, 859
Dermorphin, nmr study of analogs of, 2349
Detergents, effect on hydroxyalkyl-Gln peptides, 1595
Deuterated proteins, solvent isotope effect on, 887
—, stability of, 887
Deuteration, *N*-, effect on polypeptide VCD, 1519
Deuterium effect, on protein redox potential, 195(C)
Deuterium exchange, of 8-CH of purine nucleotides, 1011
Diadenosine tetraphosphate, complex with *cis*-platinum, 1623
Diastereomers, Ala-Ala, Raman study of, 1917
Dielectric constant, of hydrated collagen, 1725
Dielectric properties, of DNA, 593
Differential scanning calorimetry, of normal and deuterated phycocyanins, 887
Differential scanning microcalorimetry, of three-stranded nucleotide complexes, 2361
Diffusion, of poly(Lys), 1637
—, of rodlike polyelectrolytes, 797
—, simulated, of rigid and flexible structures, 167
Diffusion coefficient, of LiDNA, 1757
—, rotational, of gramicidin dimer, 611(C)
—, rotational, of rods, 611(C)
—, translational, of gramicidin dimer, 611(C)
—, translational, of rods, 611(C)
—, of zinc-insulin, 2407
Diffusion control, of protein–DNA association, 1869
Diketopiperazine, flexibility calculation of, 397
Dimerization, of antifreeze glycoproteins, 1379
—, of gramicidin model peptides, 1905
Dinucleoside, structure of proflavine complex, 1025
Dipeptide, *ab initio* study of conformers, 2335
Dipole–dipole coupling, in poly(U), 2623
Dipole moment, of membrane-bound bacteriorhodopsin, 707
Dipoles, α-helix, interactions of, 809
Direct difference ir spectroscopy, of protein hydration, 1647
Dissociation kinetics, of protein– DNA complexes, 1249
Distribution, statistical, of depolymerization products, 1735
Disulfide bridge, in malformin A simulation, 2513
Disulfides, cyclic, conformations in solution, 1085
Divalent ions, effect on inorganic phosphatase, 159
DNA, A-, B-, and Z-forms, electrostatic stabilization of, 2743
—, A- and B-forms, anharmonic vibrations of, 471
—, A-form, CD of, 1(C)
—, A-form, low-frequency modes, 1795(C)
—, B- and Z-forms, distribution of ions around, 2801
—, B-form, base-opening simulation, 2499
—, B-form, proton exchange in, 2499
—, binding of drugs to, 2671
—, binding of ethidium azides to, 1067
—, calculated LD and CD of, 435
—, calf thymus, dielectric properties of, 593
—, circular, topoisomer distribution, 853(C)
—, circular, twist and writhing in, 1835
—, compared with chromatin, 1067
—, complex with dyes, 629
—, conformational calculations, 2603
—, conformational survey of, 2419
—, dielectric relaxation of, 1457
—, dinucleosomal, quasielastic light scattering by, 797
—, first-neighbor analysis of CD, 2639
—, ψ-form, CD of, 325

—, ψ-form, complexed with poly(Ala)(Lys), 325
—, gel electrophoresis, 2725
—, gel phase, polyamine and salt effects on, 1307
—, gel phase, swelling pressure of, 1307
—, hydrated, computer simulation of arrangement of Na^+ ions, 257
—, kinetics of B–Z transition, 2211
—, kinetics of protein dissociation, 1249
—, ligand binding sites resolved by CD, 2661
—, lithium, conformation of, 1757
—, lithium, hydrodynamic properties of, 1757
—, loop formation, 601
—, optimized conformations of, 2441
—, orientation of phosphate, 2603
—, P-form, conformation of, 1269
—, phage T7, precollapse effects of spermidine, 2835
—, phenanthrene binding, 897
—, protamine binding to, 2559
—, pyrene binding, 897
—, rigidity vs. temperature, 191(C)
—, segmental diffusion of, 1869
—, speed of sound in, 1185
—, superhelical, dynamic light scattering of, 1113
—, ΨW-14, dynamic light scattering of, 767
—, ΨW-14, titratable joints in, 767
—, X-form, CD of, 1(C)
—, Z- and B-forms, resonance Raman study of, 1931
—, Z-form, base-opening simulation, 2499
—, Z-form, new electronic absorption, 1931
—, Z-form, proton exchange in, 2499
DNA aggregation, polyamine and salt effects, 1295
DNA bending, kink model of, 191(C)
DNA conformation, effect of methanol on, 1(C)
DNA conformations, Raman characterization of, 235
DNA–daunomycin complexes, calculated energies of, 139
DNA–ethidium binding, 83
DNA fibers, acoustic vibration of, 913
DNA fragments, complex with basic residues, 1979
DNA gelation, effect of [DNA], cations, 2141
—, quasielastic light scattering study, 2141
DNA helix, fluctuational opening of, 1137(E)-(E)
—, mismatched bases in, 2901
DNA intercalation, by daunomycin, 139
DNA–ligand binding, relaxation kinetics, 537
DNA melting, kinetics of, 409
—, slow relaxation in, 39
DNA oligomers, B–Z and Z–Z′ transitions, 2127
—, ^1H- and ^{31}P- studies, 775
DNA oligonucleotides, ethidium-binding thermodynamics, 213
DNA–protein association, diffusion control of, 1869
DNA unwinding, kinetics of, 409
Domains, protein, 1605
L-Dopa, as a melanin precursor, 1481
Double helix, energy-minimized conformers of, 2441
—, possible conformers scanned, 2419
Dyes, acridine, intercalation into DNA, 629
—, azo, poly(L-Arg) complex with, 1367
Dynamic charge, from diffusion coefficients, 797
Dynamic light scattering, of superhelical DNA, 1113

γ-Effect, on ^{13}C-chemical shifts, 819
Elastic scattering, of myosin, 1283
Electrical conductivity, of polyelectric complexes, 59
Electric birefringence, of *Halobacterium* membrane, 707
—, of myosin, 1283
—, of nucleotide–dien-Pt complexes, 973
—, of poly(γ-Bzl-L-Glu), 1667
Electronic transition, new, for Z-DNA, 1931
Electron microscopy, of cellulose microfibrils, 1807(C)
—, of P-form DNA, 1269
Electron spin resonance, of amylose, 2543
Electron staining, of cellulose reducing termini, 1807(C)
Electron transfer reactions, catalyzed by Fe(III) complexes, 1465
—, stereoselective, 1465
Electrophoretic mobility, of RNA and DNA duplexes, 2725
Electrostatic stabilization, of A-, B-, and Z-DNA, 2743
Ellipsoid, triaxial, 843(E)
Energy minimization, in building peptide backbone, 1207
—, of collagen model polymers, 1499
—, of right and left DNA helices, 2441
Energy pathways, for *N*-acetyl-*N*-methylalanyl, 2335
Enkephalin, conformation of related cyclic peptides, 2325
Enkephalin analogs, containing a cystine bridge, 2325
—, cyclic, conformation of, 1441
Enthalpy, of κ-carrageenan transition, 2825
Enthalpy of solvation, of lysozyme,β-lactoglobulin A, 1943
Entropy, conformational, of protein folding, 1605
Entropy of solvation, of lysozyme,β-lactoglobulin A, 1943

Epinephrine oxidation, catalyzed by polypeptide-bound Fe(III), 1465
Equilibrium dialysis, of monomer–poly(BU) complexes, 831
Errata, 607, 843, 985, 1137, 1141, 1143
Ethanol, B–Z, Z–Z′ transitions in, 2127
—, coagulation of casein by, 989(C)
Ethidium, binding to DNA, 2671
Ethidium analogs, DNA interactions, 83
—, structure–activity relations, 83
Ethidium azides, as photoaffinity probes, 1067
Ethidium–nucleotide binding, sequence dependence of, 213
—, thermodynamics of, 213
Ethylenediamine, cellulose complex with, 111
Ethylurea, inhibition of collagen fibrillogenesis, 313
Eu^{+3}, binding to poly(L-Glu), 847(C)
Exchange, ^3H, temperature dependence for spectrin, 2587
Exchange kinetics, of 8-CH of purine nucleotides, 1011

Ferric chelate catalysts, polypeptide supported, 1465
Fibrillogenesis, collagen, hydrophobic interactions in, 313
—, collagen, role of telopeptides in, 313
Fibrin, oligomer formation kinetics, 127
—, oligomer ligation kinetics, 127
Fibrin film, elastic modulus, 2311
—, polymerized with ancrod, 2311
—, stress relaxation, 2311
Fibrinogen, fibrin formation from, 127
Films, polypeptide, vibrational CD of, 1533
Flexibility, in Brownian dynamics simulation, 167
—, calculated, of diketopiperazine ring, 397
Fluorescence, of Eu^{+3}-poly(L-Glu) binding, 847(C)
Fluorescence depolarization, of amylose, 2543
—, calculated, of wormlike chains, 363
—, of fluorescein–amylose conjugates, 1043
Fluorescence lifetime, of the protamine thynnine, 2559
Fluorescence polarization, model-independent analysis of, 2383
—, theoretical limitations of, 2383
Fluorescent probes, angular distribution in biological systems, 2383
Folding, protein, diffusion–collision model for, 675
Folding pathway, of crosslinked lysozyme, 2489
Full-atom chain, generation of, 1207

Gastrin, little and mini-, Mg^{+2} binding to, 1225
Gel, DNA, polyamine and salt effects on, 1307
—, DNA, swelling pressure of, 1307
α-Gelatin III, collagen folding in, 353
Gelation, of κ-carrageenan, 735
—, DNA, effect of [DNA], cations, 2141
—, DNA, quasielastic light scattering study, 2141
Gel electrophoresis, of RNA and DNA duplexes, 2725
Gibbs free energy of solvation, of lysozyme, β-lactoglobulin A, 1943
Glutamates, oligo-γ-benzyl-, ir conformational study, 2573
Glutamine, hydroxyalkyl-, conformational properties of, 1595
$(Gly\text{-}Ala\text{-}Ala)_n$, conformational analysis of, 1499
$(Gly\text{-}Ala\text{-}Hyp)_n$, conformational analysis of, 1499
Glycol chitosan, dielectric properties, of polyelectric complexes, 59
Glycoproteins, antifreeze, length and activity of, 1379
Glycosaminoglycans, counterion condensation, 2223
—, polyelectrolyte catalysis by, 2223
$(Gly\text{-}Pro\text{-}Ala)_n$, conformational analysis of, 1499
Gouy–Chapman theory, for DNA intercalation, 629
Gramicidin A, building computer model of, 23
—, dimerization of peptide models for, 1905
Gramicidin dimer, diffusion coefficients of, 611(C)
Guanosine 5′-diphosphate, magnetic CD of, 2715

Halobacterium halobium, birefringence of purple membrane, 707
α-Helical coiled coils, interaction between, 1811
Helical conformation, of amylose, 2525, 2543
Helix, 3_{10}, in poly(Aib), 2025
—, amphiphilic, hydrophobic moment treatment of, 1057
—, DNA, transition from right- to left-handed, 511
—, double, fluctuational opening of, 1137(E)-(E)
—, α_{II} and α_I, vibrational analysis, 923
—, interwound form, 2963(C)
—, triple, role of proline in packing of, 2781
α-Helix, critical length for hydrophobic peptides, 1411
—, effect of handedness on VCD, 1519
—, transition to β-sheet, 2879
β-Helix, computer building of, 23
—, dimerization of peptide models for, 1905
Helix–coil transition, 735
—, in κ-carrageenan, 2825
—, effect of counterion condensation on, 1771

—, effect of hydration on, 1961
—, and hydrophobic moment, 201
—, in hydroxyalkyl-Gln peptides, 1595
—, in Ile, Val, Leu homopolymers, 1961
—, nonequilibrium, 39
—, of polyamine-complexed DNA, 1295
—, in spectrin, 2587
—, surfactant effects for poly(L-Glu), 1333
—, thermodynamic analysis of, 1605
α-Helix dipoles, interactions of, 809
β-Helix model peptides, head-to-head dimerization of, 1905
Helix unwinding, stereochemical modeling of, 1169
Hemoglobin, precipitation with polyethylene glycol, 2761
Heparin, conformation of, 995
—, counterion condensation, 2223
—, polyelectrolyte catalysis by, 2223
Hexokinase, conformational change of, 2943(C)
—, normal modes of, 2943(C)
Histidine, nucleic acid complexation, 1979
—, sequential polypeptides with Arg, Leu, 2299
Histone H1, reassociation with chromatin, 2195
Hormones, pituitary, CD of, 5
—, thyroid, protein binding of, 2931
Hyaluronate, fractionated, equilibrium sedimentation of carbazole analysis of, 647
—, fractionated, viscosity of, 647
—, ^{23}Na nmr study of counterion binding, 1683
Hyaluronic acid, glycol chitosan complexes, 59
Hybrid tropomyosins, detection of, 1811
—, relative stability of, 1811
Hydration, of collagen fibers, 337
—, and dielectric properties of collagen, 1725
—, DNA, microwave study of, 593
—, effect on helix–coil transition, 1961
—, of hyaluronate and chondroitin, 1683
—, sequential, of lysozyme and α-lactalbumin, 1647
—, and speed of sound in DNA, 1185
Hydrodynamic properties, of complex rigid molecules, 2243
—, of rigid bent rod, 2243
Hydrodynamics, of rigid and flexible structures, 167
Hydrogen bonding, of amino acids to nucleic acids, 1995
—, of poly(L-Tyr) to phosphate, 695
—, in redox proteins, 195(C)
Hydrogen bonds, polarizability of, 695
Hydrogen exchange, in RNA premelting, 2099
Hydrolysis, polymer, distribution of products from, 859
Hydrophobicity, and protein helicity, 1057
Hydrophobic moments, of partially ordered proteins, 1057
—, of sequential copolypeptides, 201
Hypoxanthine, magnetic CD of, 2715

Ice crystalline habit, and antifreeze glycoprotein activity, 1379
Immune response, synthetic polymers studies, 1141(E)
Inorganic phosphatase, interaction with ions, P_i, 159
—, x-ray scattering studies, 159
Insulin, despentapeptide, x-ray structure of, 391(C)
—, zinc, aggregation of, 2407
—, zinc, diffusion coefficient of, 2407
Insulin structure, monomeric versus hexameric, 391(C)
Intercalation, DNA, by daunomycin, 139
—, DNA, by pyrene and phenanthrene, 897
—, DNA, dynamic light scattering study, 1113
—, DNA, polyelectrolyte effects on, 2671
—, of dyes into DNA, 629
—, of ethidium into oligonucleotides, 213
—, of proflavine into dinucleosides, 1025
Intercalation sites, computer simulation of, 2853
Iodine, amylose–SDS complexation, 2083
Ionic strength, and A-, B-, and Z-DNA stability, 2743
—, effect on DNA conformation, 797
—, effect on poly(Lys) diffusion, 1637
—, effects on polyamine–DNA interactions, 1295
Ionophores, peptide, 563
Ions, distribution around B- and Z-DNA, 2801
Ion transport, by cyclic octapeptide, 563
IR, direct difference, of protein hydration, 1647
—, polarized, of poly(Aib), 2025
—, of poly(U) in D_2O, 2623
—, of premelting in RNA, 2099
IR LD study, of DNA phosphate geometry, 2603
Iron–sulfur proteins, effect of deuteration, 195(C)
IR spectroscopy, of β-Ca-poly(L-Glu), 1565
—, Fourier transform, of Ala-Gly-Gly, 623(C)
—, of H-bonding in poly(L-Tyr), 695
—, of poly(dG-dC)-poly(dG-dC), 1931
IR spectrum, of bacteriorhodopsin, 923
—, of α-poly(L-alanine), 923
IR studies, Fourier transform, of phosphate diesters, 2157
—, of H-bonding in γ-Bzl-Glu oligomers, 2573
—, of hydrophobic oligopeptides, 1411
—, of P-form DNA, 1269
IR study, of poly(L-Ala) low-frequency modes, 2891

Isotope effect, solvent, on stability of deuterated proteins, 887

Joint, titratable, in ΨW-14 DNA, 767

Kinetics, of amylose–iodine–SDS complexation, 2083
—, of B–Z transition in DNA, 2211
—, of collagen fold formation, 353
—, of cooperatively melting DNA, 409
—, of DNA–ligand binding, 537
—, of fibrinogen–fibrin conversion, 127
—, of ^{3}H-exchange in spectrin, 2587
—, of protein–DNA dissociation, 1249
—, of protein folding, 675
Kinked DNA, computer modeling of, 2853
Knots, in supercoiled DNA, 1835
Kuhn segments, length for amylose, 2543

α-Lactalbumin, ir study of hydration, 1647
β-Lactoglobulin A, solvation thermodynamics, 1943
Laser Raman spectroscopy, of mononucleotides, 2067
Laser spectroscopy, of Eu^{+3}-poly(L-Glu) binding, 847(C)
LD, of DNA–spermidine interaction, 2835
—, of nucleic acids, 435
LD spectrum, theoretical, for collagen, 1891
Leucine, sequential polypeptides with Arg, His, 2299
$(Leu\text{-}Leu\text{-}Ala)_n$ oligomers, conformation of, 1411
—, synthesis of, 1397
Ligand-binding sites, resolved by CD analysis of DNA, 2661
Ligands, DNA, relaxation kinetics for, 537
—, large, kinetics of dissociation, 1249
Ligation, of fibrin oligomers, 127
Light, conformational changes induced by, 1423
Light scattering, calculated, of wormlike chains, 363
—, dynamic, of ΨW-14 DNA, 767
—, laser, study of LiDNA diffusion, 1757
—, quasielastic, of DNA gelation, 2141
—, quasielastic, of zinc-insulin, 2407
—, static, of zinc-insulin, 2407
—, by wormlike chains, 607(E)
Light-scattering studies, of acoustic modes of DNA, 1185
Linked-atom-least-squares, for modeling of malformin A, 2513
Linking number, DNA, distribution of, 853(C)
Liquid chromatography, coupled-column, 897
Liquid crystals, collagen solution, 1261
Little gastrin, Mg^{2+} binding to, 1225
Long-range coupling, assignment of aromatic residues by, 1799(C)
Loop formation, DNA, 601
Lysine, nucleic acid complexation, 1979
Lysozyme, ir study of hydration, 1647
—, photoacoustic spectroscopy of, 2951(C)
—, solvation thermodynamics, 1943
Lysozyme unfolding, effect of crosslinking on, 2489
—, effect of inhibitor binding on, 2489
—, role of solvent, 2473
—, transition state for, 2473
—, transition state of, 2489

Macromolecules, rigid, viscoelasticity of, 2243
Magnesium, binding to polyphosphate, 2671
Magnesium ion, binding to gastrins, 1225
Magnetic CD, of purines, 2715
Magnetic orientation, of collagen fibrils, 1261
Malformin A, computer modeling of, 2513
—, conformational versatility of, 2513
Manning theory, of counterion condensation, 287
Matrix, polypeptide, as catalytic support, 1465
Matrix formulation, of coil–β-sheet transition, 1701
Matrix treatment, of poly(L-lysine) α↔β transition, 2879
Melanin, structural dynamics of, 1481
Melting, DNA, kinetics and cooperativity of, 409
—, DNA, polyamine and salt effects, 1295
—, DNA, slow relaxation in, 39
—, nucleotide, effect of dien-Pt on, 973
—, nucleotide, effect of *trans*-$Pt(NH_3)_2Cl_2$ on, 945
—, of poly(BU)–monomer complexes, 831
—, thermal, of myosin, 1283
—, of three-stranded nucleotide complexes, 2361
—, of yeast tRNA–aspartate, 71
Methanol, effect on DNA conformation, 1(C)
9-Methyladenine, thermodynamics of poly(BU) binding, 831
$(Met\text{-}Met\text{-}Leu)_n$ oligomers, conformation of, 1411
—, synthesis of, 1397
Metmyoglobin complexes, difference spectra, 1147
—, temperature, spin effects, 1147
Micelles, casein, ethanol coagulation, 989(C)
Microcalorimetry, of κ-carrageenan, 2825
Microdomains, role in protein folding, 675
Microwave absorption, of DNA fibers, 913
Microwave study, of DNA dielectric properties, 593
Minigastrin, Mg^{2+} binding to, 1225
Model building, based on C^α coordinates, 1207
Molecular dynamics, of hydrated DNA, 257

Molecular mechanics, of B- and Z-DNA, 2499
—, of prealbumin–thyroxine complex, 2931
—, of water–protein interactions, 1513
Molecular-mechanics simulation, of DNA with mismatched bases, 2901
Mononucleosomes, theory of CD, 1315
Monte Carlo analysis, of DNA loop formation, 601
Monte Carlo calculation, of heparin x-ray scattering, 995
Monte Carlo treatment, of couterion–polyelectrolyte system, 271
Mössbauer radiation, Rayleigh scattering of, 1481
Mucopolysaccharides, glycol chitosan complexes, 59
Muscle fibers, fluorescence polarization model applied to, 2383
—, order in myosin-actin bridge, molecular order in, 2383
Myosin, rotational relaxation time of, 1283
Myosin rods, rotational relaxation time of, 1283

Neighbor exclusion model, in DNA–ligand binding, 537
o-Nitrophenylsulfenyl amino acids, improved synthesis of, 1397
Nmr, of adenosine 5′-phosphorimidates, 667
—, ^{13}C-, of collagen fibrils, 2279
—, ^{13}C-, of collagenlike polypeptides, 2279
—, ^{13}C-, of rigid polypeptides, 819
—, of L-Cys-L-Cys cyclic disulfides, 1085
—, of dermorphin analogs, 2349
—, ^{1}H- and ^{31}P-, of d-$(CCG)_2$ and d-$(CG)_3$ helices, 775
—, of nucleotide–dien-Pt complexes, 973
—, ^{31}P-, of deoxyoligonucleotides, 575
—, ^{31}P-, of phosphate diesters, 2157
—, ^{31}P-, of polynucleotides, 2157
—, of polynucleotide–*trans*-Pt complexes, 961
—, structure of Ap_4A-*cis*-platinum complex by, 1623
—, two-dimensional, for peptide sequencing, 1799(C)
—, two-dimensional, of gramicidin model peptides, 1905
—, two-dimensional, use of long-range coupling in, 1799(C)
Nmr relaxation studies, ^{23}Na, of polyelectrolyte–counterion binding, 1683
—, ^{17}O, of glycosaminoglycan hydration, 1683
Normal mode analysis, of poly(Aib), 2025
—, of poly(U) in D_2O, 2623
Normal modes, of β-Ca-poly(L-Glu), 1565
—, from crystal structures, 2943(C)
—, of hexokinase, 2943(C)
—, low-frequency, in proteins, 1099
—, low-frequency, of A-DNA, 1795(C)
—, of mononucleotides, 2067
—, of α-poly(L-alanine), 923
Nucleic acids, aromatic amino acid stacking, 2009
—, charge interactions with proteins, 1979
—, computer generation of, 2853
—, H-bonding to amino acids, 1995
—, intercalation sites in, 2853
—, kinks in, 2853
—, uv resonance Raman studies of, 2067
Nucleosides, di-, structure of drug complex, 1025
Nucleosomes, theory of CD, 1315
Nucleotides, 5′, Raman study of, 1011
—, B-to-Z transition in, 511
—, cyclic, Raman study of, 1011

Oligonucleotides, DNA and RNA, ethidium-binding thermodynamics, 213
Oligopeptides, CD studies, 877
—, hydrophobic, conformation of, 1411
—, synthesis from Nps-amino acids, 1397
Opioid peptides, nmr study of, 2349
Optical birefringence, of collagen solutions, 1261
Order–disorder transition, matrix formulation of, 1701

Packing, helical, effect of dipole interactions on, 809
—, parallel, of triple-helical polypeptides, 2781
Pancreatic trypsin inhibitor (PTI), low-frequency vibrations in, 1099
Peptide, 11-residue, interactions of helix dipoles in, 809
Peptide synthesis, using Nps-amino acids, 1397
Persistence length, DNA, effect of spermidine on, 2835
—, of DNA and RNA, 2725
—, LiDNA, effect of on [LiCl], 1757
Phase transition, induced by high ionic strength, 1637
Phenanthrene, binding to DNA, 897
pH jump technique, applied to tyrosine titration, 1347
Phonon spectrum, of A-DNA, 1795(C)
Phosphate, H-bonds to poly (L-Tyr), 695
—, orientation in DNA, 2603
Phosphate esters, calculated ^{31}P-nmr of J PH and $\sigma^{31}P$, 377
—, torsion angles of, 377
Photoacoustic spectroscopy, of aqueous lysozyme, 2951(C)
Photoaffinity labeling, of chromatin, 1067
Photochromism, in azo-derivatized poly(L-Glu), 1423
Photoisomerization, of azobenzene substituents in polypeptides, 1423

Phycocyanins, solvent isotope effect on, 887
—, stability of deuterated versus normal, 887
Pituitary hormones, CD of, 5
Platinum, *cis*-dichlorodiamine, complex with GMP, 2067
—, *trans*-dichloro-diamine, polynucleotide interactions, 945, 961
—, 2-hydroxyethanethiolate [2,2′,-2″-terpyridine], 1113
Platinum chloride, chlorodiethylenetriamino, polynucleotide interactions, 973
Platinum,*cis*-diamminedichloro complex with diadenosine tetraphosphate, 1623
^{31}P-nmr, of deoxyoligonucleotides, 575
Poisson–Boltzmann calculation, of ion distribution around DNA, 2801
Poisson–Boltzmann equation, solutions of, 287
Poisson–Boltzmann theory, for DNA intercalation, 629
Polyacrylic acid, dissociation constant of, 2671
Poly(L-alanine), low-frequency dynamics of, 2891
—, Raman study of, 2891
α-Poly(L-alanine), vibrational analysis of, 923
Poly(alanine)(lysine), complexes with DNA, 325
Polyamines, DNA collapse by, 1307
—, effects on DNA melting, 1295
—, precollapse effect on DNA, 2835
Poly(α-aminoisobutyric acid), 3_{10}-helix in, 2025
—, vibrational analysis of, 2025
Poly(L-arginine), induced CD of dye complex, 1367
Poly(γ-benzyl-α,L-glutamate), aggregation of, 719
—, electric birefringence study, 1667
—, Kerr constant, 1667
Poly(5-bromouridylic acid), CD of complexes, 493
—, complexes with adenine and derivatives, 493
—, thermodynamics or monomer binding to, 831
Poly(dCdG)-poly(dCdG), CD of B–Z, Z–Z′ transition, 2127
—, effects of ethanol, 2127
Poly(dG—dC)-poly(dG—dC), B–,B*–, and Z forms, 2211
—, CD and uv studies of, 2211
—, CD of, 325
—, complexes with poly(Ala)(Lys), 325
—, ir and Raman study of, 1931
Polydispersity, analytical methods for, 1667
Polyelectrolyte, counterion distribution, 271
—, counterion distribution about, 287
—, ionic effects on thermal stability of, 1771
—, ligand binding equilibria of, 2671
Polyelectrolyte catalysis, of auramine O hydrolysis by heparin, 2223
Polyelectrolyte complexes, of glycol chitosan, dielectric properties of, 59
Polyethylene glycol, precipitation of hemoglobin, 2761
Poly(gluatamate), as catalytic support, 1465
Poly(L-glutamate), Eu^{+3} binding to, 847(C)
Poly(L-glutamate),β-calcium, vibrational analysis of, 1565
Poly(L-glutamic acid), containing azo chromophores, 1423
—, interaction with cationic surfactants, 1333
Polyglycine, Ala-Gly-Gly compared with, 623(C)
Poly(Gly-Pro-Pro), β-bends in, 1193
Poly(Gly-Pro-X), CD studies of, 617(C)
Poly(Gly-X-Pro), CD studies of, 617(C)
Poly(I), interaction with dien-Pt, 973
—, interaction with *trans*-Pt, 945, 961
Poly(I)-poly(C), interaction wih *trans*-Pt, 961
—, interaction with dien-Pt, 973
—, interaction with *trans*-Pt, 945, 1143(E)
Poly(isoleucine), helix–coil transition in, 1961
Poly(leucine), helix–coil transition in, 1961
Poly(lysine), diffusion of, 1637
—, phase transition of, 1637
—, $\alpha \leftrightarrow \beta$ transition in, 2879
Polynucleotides, ^{31}P-nmr chemical shifts, 2157
Polyphosphate, magnesium binding to, 2671
Polyproline II, Ala-Gly-Gly compared with, 623(C)
Polysaccharides, conformational transitions of, 1771
—, depolymerization of, 859
—, kinetics of iodine complexation, 2083
Poly(L-tyrosine), H-bonding to phosphate, 695
Poly(uridylic acid), complexes with adenine dinucleotides, 2361
—, conformation in D_2O, 2623
—, ir and Raman study of, 2623
Poly(valine), helix–coil transition in, 1961
Potential, interatomic, for water–protein interactions, 1513
Prealbumin, thyroid hormone binding, 2931
Precipitation, of hemoglobin by polyethylene glycol, 2761
Premelting, in synthetic RNA duplex, 2099
Pressure-jump technique, for amylose–I_3^- binding, 2083
Proflavine, intercalation into DNA, 629
—, structure of nucleoside complex, 1025
Proline, and triple helix-packing, 2781
Proline hydroxylation, conformational effects on, 1193
(Prolyl-prolyl-glycine)$_{10}$, Raman study of, 2955(C)
Pro-Pro-Gly-Pro, β-bends in, 1193
Protamines, complexes with Cu(II), 1241
—, DNA binding of, 2559
—, fluorescence of, 2559

Protein conformation, topological modeling of, 1547
Protein–DNA association, diffusion control of, 1869
Protein folding, ΔS associated with, 1605
—, diffusion–collision model for, 675
—, kinetics of, 675
Protein hydration, direct difference ir study, 1647
Protein precipitation, by polyethylene glycol, 2761
Proteins, charge interactions with nucleic acids, 1979
—, H-bonding to nucleic acids, 1995
—, ordered, hydrophobic moments of, 1057
—, stacking with nucleic acids, 2009
Protein stability, estimated from x-ray data, 1605
Protein–water interactions, 1513
Proton exchange, mechanisms in DNA, 2499
Purine bases, magnetic CD of, 2715
Purine nucleotides, conformation of, 1011
Putrescine, DNA derivatized with, 767
Pyrene, binding to DNA, 897

Quantum mechanical calculation, of diketopiperazine flexibility, 397
Quasielastic light scattering, of dinucleosomal DNA, 797
—, of DNA gelation, 2141
—, of poly(lysine), 1637
—, of small ion–polyion coupled modes, 1637
—, of substance P aggregates, 747
—, of zinc-insulin, 2407
Quasiharmonic oscillator approximation, to low-frequency vibrations, 1099

Raman scattering, calculated, for A- and B-DNA, 471
Raman spectroscopy, of Ala-Ala diastereomers, 1917
—, of β-Ca-poly(L-Glu), 1565
—, of DNA structures, 235
—, laser, of Ala-Gly-Gly, 623(C)
—, of poly(Aib) films, 2025
—, of poly(L-Ala), 2891
—, of purine nucleotides, 1011
—, resonance, of mononucleotides, 2067
—, resonance, of poly(dG-dC)-poly(dG-dC), 1931
—, of synthetic collagen analogs, 2955(C)
Raman spectrum, of α-poly(L-alanine), 923
Raman studies, of tRNA melting, 71
Raman study, of poly(U), 2623
Random coil, suppressed in $\alpha \leftrightarrow \beta$ transition, 2879
Random coil–β-sheet transition, matrix formulation of, 1701
Random coil structures, similarities among, 1325
Random walk, applied to DNA melting, 39
Rayleigh scattering, of Mössbauer radiation by melanin, 1481
Recognition, of nucleic acids by proteins, 1995, 2009
—, protein–nucleic acid, 1979
Redox potential, proteins, deuterium effect, 195(C)
Redox proteins, effect of deuteration, 195(C)
Reflectometry, time domain, of DNA, 1457
Relaxation, dielectric, of DNA, 1457
—, slow, in DNA melting, 39
Resonance Raman spectroscopy, of mononucleotides, 2067
—, of poly(dG-dC)-poly(dG-dC), 1931
Rheometry, of DNA gels, 2141
Ribbon-peptide representation, of protein conformation, 1547
Rigidity, DNA, temperature dependence of, 191(C)
—, ΨW-14 DNA, pH dependence of, 767
Ring-closure, DNA, probability of, 601
Ring-current shifts, calculated, for mismatched (wobble) base pairs, 2901
RNA, calculated LD and CD of, 435
—, double-stranded, gel electrophoresis, 2725
—, transfer, conformational energy calculations, 2173
RNA duplexes, CD studies of, 2099
—, premelting in, 2099
RNA fragments, complex with basic residues, 1979
RNA helix, conformational change in, 1169
RNA oligonucleotides, ethidium-binding thermodynamics, 213
Rods, diffusion coefficients of, 611(C)
—, diffusion of, 797
Rotational relaxation, in amylose chains, 1043

Salt effect, on DNA intercalation, 629
—, on ligand–polyion binding, 2671
Scattering, small-angle, of heparin, 995
Scylliorhinine Z_3, complex with Cu(II), 1241
Sedimentation, of amylose, 2543
—, of LiDNA, 1757
Sedimentation velocity, of substance P aggregates, 747
Self-assembly, of fibrin, 127
Sequential polypeptide, Arg, His, Leu, synthesis and β-structure of, 2299
β-Sheet, antiparallel, statistical coil conversion to, 1701
—, transition from α-helix to, 2879
β-Sheet conformation, of β-Ca-poly(L-Glu), 1565
β-sheet polypeptides, vibrational CD of, 1533

Shielding constant, ^{31}P-nmr, calculation of, 377
Sodium dodecyl sulfate, effect on hydroxyalkyl-Gln peptides, 1595
—, effect on iodine–amylose complexation, 2083
Sodium ions, in DNA hydration, 257
Solubility, of hemoglobin in PEG solutions, 2761
Solvation effects, on helix–coil transition, 1961
Solvation energy, contributions to, 1951
Solvation thermodynamics, of lysozyme,β-lactoglobulin A, 1943
Solvent, role in lysozyme unfolding, 2473
Solvent effects, on B–Z, Z–Z′ transition, 2127
—, on β-cellobiose conformers, 1951
—, on ^{31}P chemical shifts, 2157
Solvent isotope effect, on deuterated proteins, 887
Somatostatin, 2D nmr of, 1799(C)
Soret spectra, of metmyoglobin complexes, 1147
Specific rotation, of carrageenan gel, 735
Spectrin, ^{3}H-exchange vs temperature, 2587
Spermidine, DNA destabilization by, 1307
—, precollapse effect on DNA, 2835
Spermidine derivatives, effects on DNA melting, 1295
Spermine, DNA destabilization by, 1307
Stability, calculated, of B- and Z-DNA conformers, 511
—, thermodynamic, of ι- and κ-carrageenans, 1771
Stacking, in protein–DNA recognition, 2009
Statistical comparison, of random coil structures, 1325
Stereo-cooligopeptides, as β-helix models, 1905
Stereoselectivity, in electron transfer reactions, 1465
Stopped-flow pH-jump technique, applied to tyrosine titration, 1347
Stress relaxation, of fibrin film, 2311
β-Structure, of Arg, His, Leu sequential polypeptides, 2299
—, in hydrophobic oligopeptides, 1411
—, and oligo-γ-Bzl-Glu concentration, 2573
Substance P, self-aggregation of, 747
Sugar, oligonucleotide, conformation in B- and Z-forms, 511
Supercoiling, DNA, interwound vs. toroidal, 1835
Superhelical DNA, dynamic light scattering of, 1113
—, titration of, 83
Surfactants, cationic, and poly(L-Glu) conformation, 1333
Synchrotron radiation, for magnetic CD study, 2715
Synthesis, of Arg, His, Leu sequential polypeptides, 2299
—, of L-Cys-L-Cys cyclic disulfides, 1085
—, improved, of Nps-amino acids, 1397
—, oligopeptide, using Nps-amino acids, 1397

Telopeptides, role in fibrillogenesis, 313
Temperature dependence, of spectrin ^{3}H-exchange, 2587
Thermodynamic parameters, of dinucleotide-polynucleotide complexes, 2361
Thermodynamics, of ethidium–nucleotide binding, 213
—, of monomer binding to poly(BU), 831
—, of protein folding, 1605
Thynnine, DNA binding of, 2559
—, fluorescence of, 2559
Thyronine,3,5,3′-triiodo, prealbumin binding simulation, 2931
Thyroxine, prealbumin binding simulation, 2931
Time domain spectroscopy, of DNA, 1457
Titration, amperometric, for amylose–I_3^- binding, 2083
—, spectrophotometric, of ethidium–DNA, 83
—, tyrosine, by pH-jump technique, 1347
T-matrix, first-neighbor analysis of CD using, 2639
Topological aspects, of protein conformation, 1547
Topology, of supercoiled DNA, 1835
Torsion angles, scanned for DNA helix, 2419
Transfer, direct, of nucleic acid ligands, 537
—, RNA phenylalanine, flexibility in, 2173
Transition state, in lysozyme unfolding, 2473
Transport, active, by peptide ionophore, 563
—, of cations by cyclic peptide, 563
Transport properties, of rigid and flexible structures, 167
Trinucleotide, B-to-Z transition in, 511
Tripeptide, Cu(II)-binding, 985(E)
Triple helix, role of proline in packing of, 2781
Tritium exchange, temperature dependence for spectrin, 2587
tRNA, CD conformational study, 759
—, conformation of, 71
—, Raman studies, 71
Tropomyosins,α–β hybrid, detection of, 1811
—, relative stabilities of, 1811
Turbidity, as measure of casein coagulation, 989(C)
Turn,β, in collagen model peptides, 617(C)
β-Turn probability, for collagen peptides, 1193
Twist, in short circular DNA, 1835
Tyrosine, H-bonding to phosphate, 695
—, titration in bovine plasma albumin, 1347

Ultrasound absorption, of carrageenan gel, 735
Unfolding, lysozyme, role of solvent, 2473

—, lysozyme, transition state, 2473
—, thermodynamics for lysozyme, 2489
Unwinding, DNA, kinetics and cooperativity of, 409
UpU, solvent effects on ^{31}P-nmr of, 2157
UV, vacuum, of purines, 2715
UV absorption studies, of poly(dG—dC)·poly(dG—dC), 2211
UV differential spectroscopy, of tRNA, 759
UV resonance Raman studies, of mononucleotides, 2067
UV spectra, of poly(I)·poly(C)–*trans*-Pt complexes, 945
UV spectrum, theoretical, for collagen, 1891

Valence force-field model, for low-frequency modes of A-DNA, 1795(C)
Valonia cellulose, parallel chain structure in, 1807(C)
Vibrational analysis, of β-Ca-poly(L-Glu), 1565
—, of poly(Aib), 2025
Vibrational CD, amide deuteration effects, 1519
—, of α-helical polypeptides, 1519
—, of polypeptide films, 1533
—, of β-sheet polypeptides, 1533
Vibrational coupling, study of peptide conformation, 1917
Vibrational spectra, of DNA structures, 235
Vibrations, acoustic, of DNA fibers, 913
—, anharmonic, simulated for DNA, 471
—, low-frequency, in proteins, 1099
—, low-frequency, of A-DNA, 1795(C)
—, low-frequency, of poly(L-alanine), 2891
Viscoelasticity, of a rigid bent rod, 2243
—, of complex rigid molecules, 2243
Viscosity, of complex rigid molecules, 2243
—, intrinsic, of aqueous amylose, 2525
—, intrinsic, of DNA–spermidine solutions, 2835
—, of rigid bent rod, 2243
—, solvent, and DNA fiber vibration, 913

Water, interaction of proteins with, 1513
Wobble base pairs, calculated stabilities of, 2901
Wormlike chains, Brownian dynamics of, 363
—, helical, as circular DNA models, 853(C)
—, hyaluronate compared with, 647
—, light scattering by, 607(E)
—, as models of LiDNA, 1757
Writhing, in short circular DNA, 1835

X-ray crystallography, of nucleoside–drug complex, 1025
X-ray diffraction, of cellulose–EDA complex, 111
—, of hydrophobic oligopeptides, 1411
X-ray scattering, of inorganic phosphatase, 159
—, intermediate-angle, of heparin, 995
—, small-angle, of heparin, 995
X-ray structure, of modified insulin, 391(C)

Zimm–Bragg parameters, for Ile, Val, Leu homopolymers, 1961
Zinc-insulin, aggregation of, 2407
—, diffusion coefficient of, 2407